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Prepared by:
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Agriculture
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Foreword

This 5th Edition of the *Economic Review of Agriculture (ERA)* is a continuation of the ministry's efforts in data consolidation and dissemination and offers basic production trends and analysis. It also provides basic domestic macro indicators and international perspectives (production and prices) that help in comparative analysis. The ERA is supplemented by the half-yearly *Agricultural Outlook* that highlights half-year results and prospects in the production calendar. Other efforts include the publication of the *Kenya Agricultural Sector Data Compendium (KASDC)*; an attempt to consolidate agricultural data to inform better policy formulation, monitoring & evaluation and is available on: www2.kilimo.go.ke. The web-site hosts datasets on Agriculture (crops), Livestock, Fisheries and Cooperatives.

This publication has for the first time dedicated a chapter that highlights some indicators on the livestock sub-sector that contributes about 40 percent of the agricultural sector share of **GDP** (24 percent). It is expected that other sub-sectors in the Agriculture & Rural Development (**ARD**) sector will soon find their space in future publications.

This edition comprises seven [7] main chapters; chapter One [1] provides basic analysis on aggregate national economic indicators for five years and contrasts it with agricultural performance. The general level in price movements especially on food items is highlighted through the average annual inflation; thus highlighting price movements especially on food items as triggered by behavior on the supply side (production).

Chapter Two [2], highlights sector and sub-sector budget allocations for the period under review and reveals that the sector is yet to achieve the recommended share of national budget as per the Maputo Declaration of 2003. Key policy interventions and reforms initiated in the sector including the 2009 *Economic Stimulus Programme (ESP)* are covered in Chapter Three [3]. Extracts on the World Food situation and forecasts by **FAO** are analyzed in Chapter Four [4] and helps to contrast with domestic production trends. Highlights on the performance of the crops sub-sector and the livestock sub-sector are presented under Chapters Five [5] and Six [6] respectively. Chapter Seven [7] presents a summary on off-take of key agricultural inputs and has a section on the level of agricultural mechanization in the country.

I am confident that as we continue to consolidate our datasets, readers and stakeholders will find it useful to access new information, contents and insights into the sector from which the Kenyan economy is so much dependent.



Romano M. Kiome, PhD, CBS
PERMANENT SECRETARY

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5. Alex W. Mwaniki – Economist I, DPIS/MoA
6. Stephen C. Njogu – Principal Agricultural Officer, DPIS/MoA
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Abbreviations

ADC	:	Agricultural Development Corporation
AFC	:	Agricultural Finance Corporation
ARD	:	Agricultural & Rural Development
ASAL	:	Arid and Semi Arid Lands
ASARECA	:	Association for Strengthening Agricultural Research In Eastern and Central Africa
ASCU	:	Agricultural Sector Coordination Unit
CBK	:	Central Bank of Kenya
DFZ	:	Disease Free Zones
FAO	:	Food and Agriculture Organization
FPEAK	:	Fresh Produce Exporters Association of Kenya
GDP	:	Gross Domestic Product
GIEWS	:	Global Information and Early Warning Systems
GTZ	:	German Technical Cooperation
Ha	:	Hectare
HCDA	:	Horticultural Crops Development Authority
KARI	:	Kenya Agricultural Research Institute
KEPHIS	:	Kenya Plant Health Inspectorate Services
KFC	:	Kenya Flower Council
KGs	:	Kilograms
KHDP	:	Kenya Horticultural Development Program
KNBS	:	Kenya National Bureau of Statistics
KRA	:	Kenya Revenue Authority
KSB	:	Kenya Sugar Board
KSHs	:	Kenya Shillings
KTDA	:	Kenya Tea Development Agency
MoA	:	Ministry of Agriculture
MoLD	:	Ministry of Livestock Development
NASEP	:	National Agriculture Sector Extension Program
NIB	:	National Irrigation Board
NYS	:	National Youth Service
PATTEC	:	Pan African Tsetse and Trypanosomiasis Eradication Campaign
PBK	:	Pyrethrum Board of Kenya
PCPB	:	Pest Control Products Board
PER	:	Public Expenditure Review
TARDA	:	Tana and Athi River Development Authority
UPAL	:	Urban Agriculture and Livestock
US \$:	United States dollar
USDA	:	United States Department of Agriculture
WASDE	:	World Agriculture Supply and Demand Estimates

1.0 OVERVIEW ON ECONOMIC PERFORMANCE

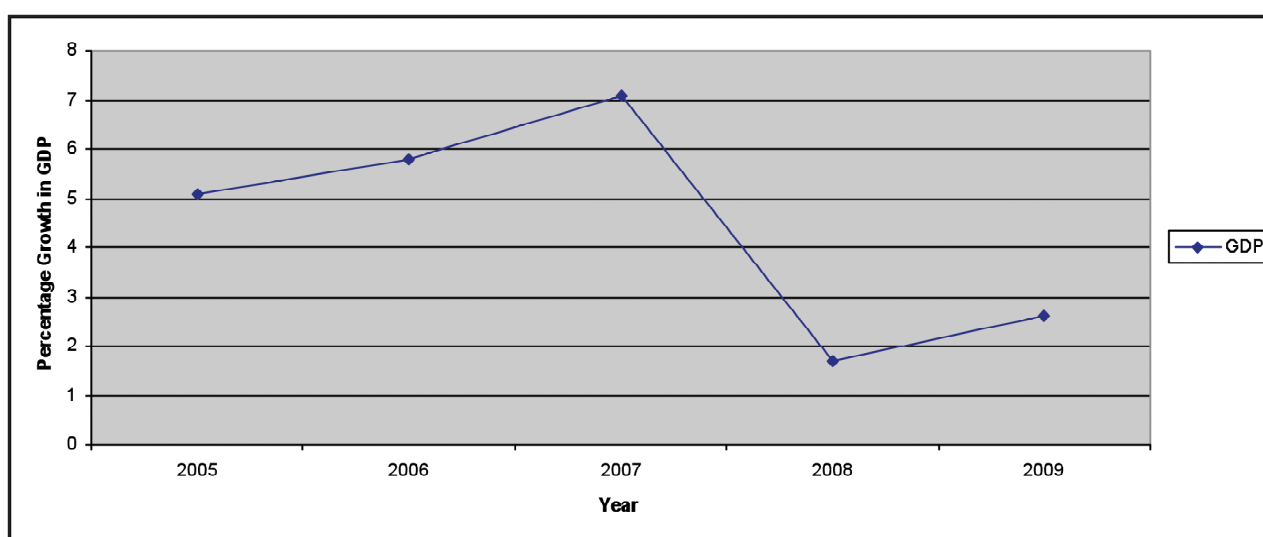
1.1 Overall Economic Performance

The economy registered a higher growth of 2.6 per cent in 2009 up 1.0 percentage point from a revised 1.6 percent in 2008 as shown in figure 1.1. This was still well below the impressive growth of 7.1 percent registered in 2007; the highest in the last decade. Recovery centered on dramatic recovery of the tourism sector, continued but slower growth in building and construction and a resilient services sector.

In the same period, the economy registered declines in the key sectors of agriculture and manufacturing. Specifically, agricultural output contracted by 2.6 percent attributed to unfavourable weather affecting outputs of tea, sisal, pyrethrum and horticultural produce. The results were however better than the contraction of 4.1 percent registered in 2008; indicating signs of gradual recovery. In the same year, output in manufacturing expanded at a slower rate of 2.0 percent compared to 3.5 percent recorded in 2008 mainly as a result of demand side constraints.

Medium-term prospects suggest the economy has the potential to return to the 7.0 percent growth trajectory last registered in 2007 with estimated growth of 4.0-5.0 percent in 2010 driven by better prospects in tourism, the services sector, recovery in the agricultural sector and a rebound in external demand. The recovery will also be reinforced by quick resolution of other domestic constraints including high energy costs, internal security threats, improvement in infrastructure and peaceful determination of the scheduled constitutional order.

Figure 1. 1: GDP Growth Rate, 2005 – 2009



Source: KNBS, Economic Survey, 2010

1.2 Performance of the Agricultural sector

1.2.1 General Performance

The sector registered mixed results in 2009. The long rains of March to April were thinly spread and the short rains expected between October and December were generally erratic and uneven; some areas received above normal rains and others lower than average rains. Prices of most agricultural commodities rose on average during the year as a result of supply constraints. Consequently, the value of aggregate marketed crops went up 3.3 percent from Kshs. 148 billion in 2008 to Ksh 153 billion in 2009 driven mainly by increased sale of perennial and annual cash crops. Due to decline in marketed maize, the value of marketed cereals declined by 13.4 percent from Kshs 13.3 billion in 2008 to Ksh 11.6 billion in 2009. In the same period, the value of marketed livestock increased by 16.3 percent, from Kshs 30.6 billion in 2008 to Kshs 35.6 billion in 2009 driven mainly by destocking on account of drought.

1.2.2 Horticulture

Horticultural export volumes declined by 15 percent from 423,129.5 metric tons in 2008 to 360,474 metric tons in 2009. This followed a reduction in the export volumes of fruits and vegetables which were affected by insufficient rainfall during the year. Volumes of exported vegetables decreased by 20 percent from 129,777 metric tons in 2008 to 104,111 metric tons in 2009. Volume of fruits export recorded the highest decline of 22 percent over the same period. The volume of flowers exported went up by 1.5 percent from 118,626.6 metric tons in 2008 to 120,395 metric tons in 2009. This was as a result of recovery in traditional markets from September 2009.

The value of horticultural exports was down 3 percent from Kshs 74 billion in 2008 to Kshs 72 billion in 2009. The value of fruit exports decreased by 10 percent from Ksh 10 billion in 2008 to Ksh 9 billion in 2009. Vegetable recorded a decline of 13 percent from Ksh 30 billion in 2008 to Ksh 26 billion in 2008. On the other hand, the value of cut flowers went up by 8 percent from Ksh 34 billion in 2008 to 37 billion in 2009 thus contributing about 52 percent of the total value of exported horticultural produce.

1.2.3 Coffee

Coffee production for the period 2008/2009 (year ending September) amounted to 54,020 metric tons, a 19.5 percent rise from 43,462 metric tons produced in 2007/2008. Meanwhile, registered coffee export prices have been on the rise for the past five years, raising from US\$ 121.8 in 2004/05 to US\$ 188 per 50kg bag in 2008/09; equivalent to a growth of 54 percent in dollar terms.

1.2.4 Sugar

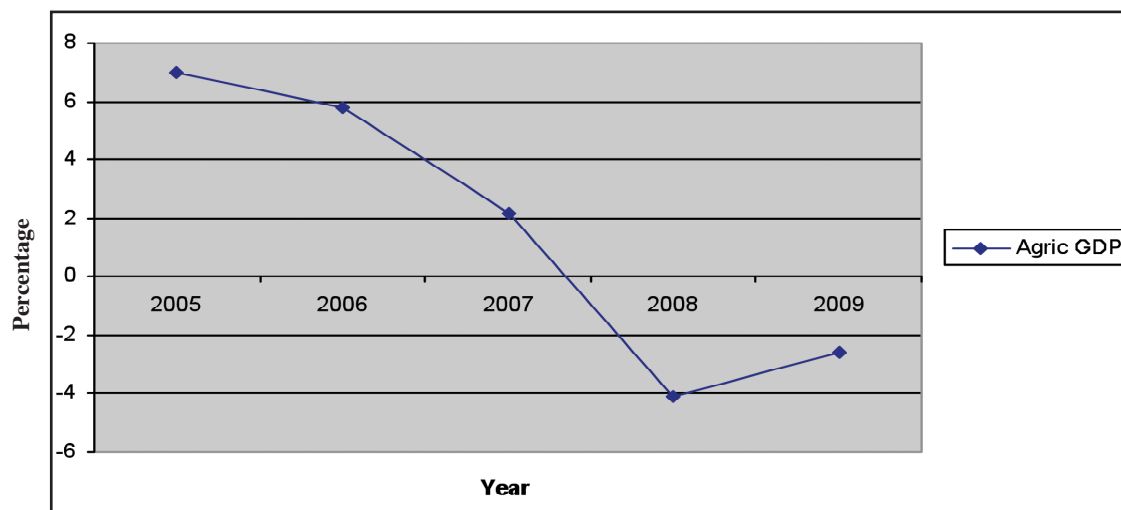
Total sugarcane production rose by 6 percent in 2009 to 548,207 tons compared to 517,667 tons in 2008 thus realizing the highest production ever for the sugar industry. Sugar sales went up by 5 percent

to 546,361 tons in 2009 from 520,315 tons in sold in 2008. In the same period, cane deliveries rose by 9 percent to 5,610,702 tons from 5,125,821 tones delivered in 2008; representing a marginal increase in the recovery rate (efficiency) from 10.00 percent in 2008 to 10.23 percent in 2009.

1.2.5 Tea

Area under tea remained almost flat in 2009 increasing from 157,770 hectares in 2008 to 158,394 hectares in 2009; equivalent to a 0.4 percent growth. Tea production in 2009 was 314,198 tons which was 9 percent decrease when compared to 345,817 tons recorded in 2008. Lower output for 2009 was due to dry spell experienced in tea growing areas East of the Rift Valley during the first quarter of the year and poorly distributed rains during the second quarter of the year. The export volume for 2009 stood at 342,482 tones, which was 10 percent lower compared to 383,444 tones recorded in 2008. The total export earnings increased by 11 percent, from Kshs 62 billion to Kshs 69 billion earned in 2008 and 2009 respectively.

Figure 1. 2 : Kenya’s Agric-GDP Growth Rates, 2005 – 2009



Source: KNBS, Economic Survey, 2010

1.3 Inflation

The overall 12-month inflation maintained a downward trend throughout the year declining from 13.3 percent in January 2009 to 5.4 percent in December 2009. The decline was more intense from May although some reversals were recorded in September and October as shown in Table 1.1. The trends can be attributed to better food supplies after the long rains of March-April and lower energy costs in the latter part of the year.

Meanwhile overall average annual inflation was 9.3 percent in 2009 down from 16.2 percent in 2008 as shown in figure 1.3. The index mix was composed of 12.6 percent upward change for food and alcoholic drinks {comprising 50.5 percent of the weight of the Consumer Price Index (CPI) basket}. In the same period, essential fuels including diesel, paraffin and petrol registered significant declines of 3.6 percent thus somewhat moderating the overall inflation for the year.

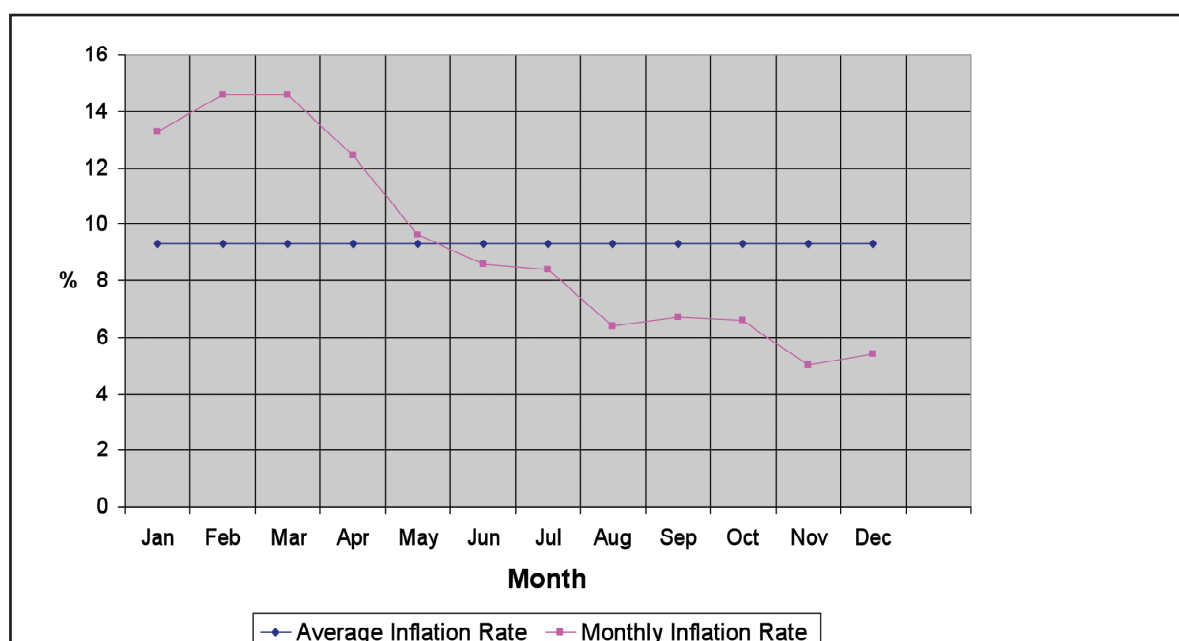
Table 1 1: Consumer Price Indices and Average Inflation Rate, 2008-2009

Month	Inflation Index		Change %
	2008	2009	
January	215.72	244.49	13.3
February	218.66	250.62	14.6
March	221.10	253.31	12.4
April	227.68	255.87	9.6
May	232.27	254.51	8.6
June	232.80	252.75	8.6
July	232.44	252.00	8.4
August	235.05	252.30	6.4
September	237.39	253.34	6.7
October	238.83	254.60	6.6
November	242.99	255.14	5.0
December	242.84	255.80	5.4
Average Annual Inflation Rate (%)			9.3

Base Year: 1997=100

Source: KNBS

Figure 1.3: Average Inflation Rates, 2009



Source: KNBS

2.0 TRENDS IN BUDGET ALLOCATION TO AGRICULTURE

2.1 Sector Budget

Total resource allocation to the Agriculture and Rural Development (ARD) sector comprising five (5) sub-sectors as shown in Table 2.1 increased by 22.1 percent from Kshs. 17,963.5 million in 2006/07 to Kshs. 21,933.3 million in 2008/09. Provisional figures indicate an increase to Kshs. 23,930 million in 2009/10 that represents a 33.2 percent increase since 2006/07. However, the allocation to the sector as a proportion of total government budget as shown in Table 2.2 has been mixed standing at 6.2 percent in 2006/07, 4.8 percent in 2007/08 before decreasing to 4.3 percent in 2008/09 and to an all time low of 2.8 percent in 2009/10. Consequently, the share of the national budget dedicated to the sector is far below the Maputo Declaration (2003) that urged Governments to allocate at least 10 percent of national budgets to the sector as a first step towards addressing food insecurity across Sub-Saharan Africa (SSA).

Overall sector budget in comparison with the national budget has equally declined to about 4.3 percent in 2008/09 and could fall further to 2.8 percent in 2009/10. Meanwhile, deeper analysis of the sector's total expenditures reveals that resource absorption capacity has been commendable averaging over 90 percent during the review period. The highest absorption rate of 98 percent was recorded in 2008/09.

Table 2 1: Expenditure for the sector Ministries (Kshs. Million, 2009/10)

Ministry	Recurrent	Development	Total
Agriculture	7,799	5,674	13,473
Cooperative Development & Marketing	923	223.0	1,146
Fisheries Development	901	1,206	2,107
Lands	1,675	860	2,535
Livestock Development	4,280	389	4,669
Total	15,578	8,352	23,930

Source: ARD Sector Report 2009 & Ministry of Finance

2.2 Sub-sector budget (Crops sub-sector)

Budgetary allocation to the Ministry of Agriculture (crops sub-sector) has generally been on an upward trend in the last four financial years as indicated but can also be traced back to 2003/04. Specifically, total actual expenditure has increased by 53 percent from Kshs. 8,569 million in 2006/07 to Kshs. 13,137 million in 2008/09. Projections however indicate that allocations will remain almost flat in 2009/10. The higher proportion of allocations is still dedicated to recurrent expenditure although the mix in favour of capital expenditure has increased steadily.

Sub-sector budget absorption rates have been varying both for recurrent and development categories; above 95 percent for recurrent expenditure and about 80 percent for the development budget; with the later attributed mostly to disbursement bottlenecks and lengthy procurement procedures.

**Table 2 2: Expenditure for the Ministry of Agriculture
(Kshs Million 2006/07– 2009/010)**

Item	2006/07		2007/08		2008/09		2009/010*
	Printed	Actual	Printed	Actual	Printed	Actual	Printed
Recurrent Budget	5,850.5	5,464.5	7,068	9,510.6	7,805	7,530.2	7,799
DEVELOPMENT BUDGET	3,654.8	3,104.3	5,225.7	4,044.9	5,289.9	5,608.4	5,674
Total Expenditure	9505.3	8,568.8	12293.7	13,555.6	13094.9	13,138.6	13,473
Total Expenditure as % of GDP*	0.73	0.56	0.82	0.75	-	0.52	-
Total Expenditure as % of total GOK expenditure	2.44	2.19	2.37	2.17	2.17	1.52	1.56
Development as % of total expenditure	38.0	36.0	43.0	29.84	40.0	42.7	42.2
Recurrent as % of total expenditure	62.0	64.0	57.0	70.2	60.0	57.3	57.8
Budget to Agric. Sector	24,288.0	-	22,514.8	-	25,757.1	21,933.3	23,930.0
Agric as % of total budget	6.2	-	4.8	-	4.3	-	2.8

Source: PER, MoA, ARD Reports

*Provisional

The analysis of the livestock sub-sector expenditure shows that recurrent expenditure has declined in absolute terms from Kshs 3,148.8 million in 2007/2008 to Kshs 2,871.7 million in the 2009/2010 representing a decline of about 8.8 percent. Likewise development expenditure fell by about 15 percent from Kshs 1,985.0 million to Kshs 1,687.7 million over the same period.

**Table 2 3: Analysis of Livestock sub-sector Expenditure
FY 2006/07- 2008/09 (Kshs. Millions)**

	Printed Estimates			Revised Estimates			Actual Expenditure		
	2006/07	2007/08	2008/09	2006/07	2007/08	2008/09	2006/07	2007/08	2008/09
Recurrent	2,209.7	3,148.8	2,871.7	330.5	202.1	707.6	3,072.6	3,270.1	3,425.3
Development	1,934.7	1,985.0	1,687.7	(238.0)	(104.4)	584.6	1,059.1	888.5	1,095.8
Total	4,144.4	4,288.7	4,559.4	92.6	97.7	1,292.2	4,131.7	4,158.65	4,521.07
Rec. as % of total	53%	73%	63%	100%	100%	55%	74%	79%	76%
Dev. as % of Total	47%	46%	37%	0%	0%	45%	26%	21%	24%

Source: M PER, MoLD

3.0 RECENT REFORMS IN THE AGRICULTURE AND LIVESTOCK SUB-SECTORS

Table 3 1: Summary of Key Reforms in 2009

Serial Number	Sub-sector	Organization	Name of Policy Document, Bill or Cabinet Memo	Stage of Processing	Remarks
1	Pyrethrum	PBK	Sessional Paper for the Revitalization of the Pyrethrum Industry.	Fast track issues on liberalization of the sector isolated in Nakuru in June 2009.	Implementation of fast track issues.
2	Seed Industry	KEPHIS	National seed Industry Policy Seeds and Plant Varieties (Amendment Bill), 2008	Policy Paper approved by cabinet on 11th September 2008. Approved by cabinet on 11th September 2008.	Preparation for launch in 2010 Awaiting incorporation of concerns raised by the AG on clauses that will impact on KEPHIS Bill which need review.
3	Sugar	KSB	Sessional Paper on Revitalization of the Sugar Industry The Sugar (Amendment) Bill, 2008 and Cabinet Memo on the Bill	Sessional Paper, Bill and Cabinet Memo ready. Sessional Paper, Bill and Cabinet Memo ready.	Awaiting comments from treasury. Awaiting comments from treasury.
4	Extension	ASCU	National Agriculture Sector Extension Policy (NASEP)	Sessional Paper and Cabinet Memo ready and submitted to Cabinet office for approval in May 2009.	Awaiting Cabinet approval.

Serial Number	Sub-sector	Organization	Name of Policy Document, Bill or Cabinet Memo	Stage of Processing	Remarks
5	Food Security and Safety		i) National Food and Nutrition Policy	Joint Cabinet Memo and Policy were forwarded to the Cabinet Office for consideration in September, 2009.	Awaiting Cabinet approval.
			ii) National Cereals and Produce (Amendment) Bill, 2007	Bill has been reviewed to address outstanding issues on Grain Development Levy and increase of Strategic Grain Reserves from 6 to 8 Million bags.	Bill awarded to consultants for completion.
6	Coffee	CBK	Amendment of the Coffee Act No. 9 of 2001	Amendment Bill, 2008 was cleaned by AG in late 2008.	The State Counsel is coordinating the team to look at the AG's draft Bill.
7	Soil Fertility and Fertilizers	KEPHIS	i) Soil Fertility Policy	Policy on Soil Fertility and Bill, 2006 was ready on March, 2006.	Awaiting finalization of the Policy on Animal Feedstuffs Bill and Policy by the Ministry of Livestock Development.
			ii) Fertilizer and Soil Conditioners Bill	Fertilizers and Soil Conditioners Bill ready.	Awaiting minor review of the Fertilizer Bill and Soil fertility Policy in light of the issues addressed by the Animal Feedstuffs Bill and Policy.
8	Horticulture	HCDA	National Horticultural Development Policy	A draft Policy is ready and circulated to the Stakeholders.	Awaiting adoption by stakeholders.

Serial Number	Sub-sector	Organization	Name of Policy Document, Bill or Cabinet Memo	Stage of Processing	Remarks
9	Potato Industry	KARI, ADC,GTZ	National Potato Industry Policy	National Potato Industry Policy and Cabinet Memo ready and forwarded to the PS in June 2009. (Policy to be combined with Cassava and other Root Crops Policy)	Waiting to be submitted to the Cabinet office for approval. (Awaiting to be combined with Cassava and other Root Crops Policy)
10	Commodity and input regulation	KEPHIS	KEPHIS Bill	KEPHIS draft Bill complete.	Bill to be published and tabled in Parliament
11	Oil crops	OCDA	Oil Seed Crops Development Policy and Bill	A draft Policy and Bill on Oil crops development is ready.	Awaiting review by stakeholders
12	Nut Crops	MoA	Nut crops Development Policy and Bill	A draft Policy and Bill is ready. (Policy to be combined with Oil Crops Policy).	Awaiting review by stakeholders. (Awaiting to be combined with Oil Crops Policy).
13	Cassava	ASARECA	National Cassava Industry Policy	Policy was ready in 2007 with the National stakeholders views incorporated. (Policy to be combined with Potato and other Root Crops Policy)	Awaiting forwarding of the Cabinet Memo to the PS. (Awaiting to be combined with Potato and other Root Crops Policy)
14	Emerging Crops	MoA	National Emerging Crops Policy	Draft Policy ready in June 2009. The Policy was forwarded to the PS in October, 2009 who directed that a stakeholders forum be held.	Awaiting review by stakeholders.

Serial Number	Sub-sector	Organization	Name of Policy Document, Bill or Cabinet Memo	Stage of Processing	Remarks
15	Urban and Peri-Urban Agriculture and Livestock (UPAL)	MoA	National Urban and Peri-Urban Agriculture and Livestock Policy	Draft Policy ready in July 2009. The Policy was forwarded to the PS in October, 2009 who directed that stakeholders, forum be held.	Awaiting review by stakeholders.
16	Extension Regulation	ASCU	Agricultural Professionals' Bill	Draft Bill ready and submitted to AG for cleaning in 2008. Cabinet Memo with the Minister for Livestock for signature.	A waiting signature of the Minister for Livestock.
17	Agriculture Sector Legislation	ASCU	Consolidated Agriculture Sector Reform Bill	Draft Bill formulated and given to ASCU for progressing, 2008 October.	Awaiting Consultants report.
18	Agricultural Finance	AFC	Agriculture Finance Corporation Amendment Bill, 2009.	Draft Amendment Bill and Memorandum of Reasons from AFC ready.	Contentious issues on the Bill being addressed by Policy Department, the State Counsel and AFC.
19	Tea	KTDA	Tea Amendment Bill, 2009.	Draft Bill and Cabinet Memorandum have been prepared.	The Bill and the Cabinet Memorandum have been forwarded to the AG and the Cabinet Office.
20		PCPB	Pest Control Act (Cap. 346) Amendment.	Gazetted by the Minister.	Gazetted by the Minister.

Source: Policy Directorate, MoA

Table 3 2: Summary of Ministry's Programs and Projects in at 2009

No.	Project Name	Location	Beneficiary population	Year Started	Year of Completion	Total cost of the project	Source of funds	Implementation status (% complete)
1	National Agriculture and Livestock Extension Programme (NALEP - SIDA)	Nation wide	3.8 Million farmers	2000	2015	Kshs 5.83 Billion	SIDA / GOK	67%
2	Arid Lands Resource Management Project (ALRMP)	28 Arid districts	5.8 million	1996	2009	KShs 60 million	World Bank / GOK	98%
3	Kenya Agricultural Productivity & Sustainable Land Management (KAPSLM)	KARI HQT	-	2007	2014	US\$ 10 million	World Bank / GOK	45%
4	Western Kenya Integrated Environment Management Program (WKIEMP)	Nyando, Yala, Nzoia rivers basins (KARI)	-	2005	2009	US\$ 4.1 Million	IDA / GOK	98%
5	Small holder Horticulture Empowerment Project (SHEP)	(Eldoret) Kisiis, Bungoma, Trans nzoia & Nyandarua	4,000	2006	2009	Kshs219 Million	JICA / GOK	100%
6	Small Holder Horticulture Development Project (SHDP)	Selected areas in Rift valley and Eastern provinces	1 million	2008	2014	Kshs 2.234 Billion	ADB / GOK	10%
7	Small holder Horticulture Marketing Project (SHoMAP)	(Nakuru) 14 districts	-	2007	2014	Kshs 2.30 Billion	IFAD / GOK	25%
8	Lake Victoria Environment Management Program (LVEMPII) - Integrated Soil And Water Conservation Project	(Kericho) Nyando, Yala & Nzoia catchments	-	2007	2022	-	IDA / SIDA/ EU	14%

No.	Project Name	Location	Beneficiary population	Year Started	Year of Completion	Total cost of the project	Source of funds	Implementation status (% complete)
9	Private Sector Development In Agriculture (PSDA)	Selected areas in Central, Eastern, Rift valley, Nyanza and Western provinces	-	2003	2012	Kshs 1.4 Billion	GTZ / GOK	65%
10	Kenya Agricultural Productivity Project (KAPP)	(KARI) 20 Districts	-	2004	2008	Kshs 3.04 Billion	World Bank / GOK	100%
11	Mt Kenya East Pilot Project (MKEPP)	Embu, Meru cent., Meru Sth, Mbeere & Tharaka	580,000	2004	2011	Kshs 2.11 Billion	IFAD / GEF / GOK	75%
12	Agriculture Sector Program Support (ASPS)	HQT, Selected districts in lower Eastern and Cost provinces	-	2005	2010	Kshs 2.34 Billion	DANIDA / GOK	88%
13	Central Kenya Dry Areas Project (CKDAP)	Nyeri (Kirinyaga, Maragwa, Thika, Nyeri & Nyandarua)	180,000	2001	2009	US \$ 18.1 Million	IFAD / BSF / GOK	98%
14	South Nyanza Community Development Project (SNCDP)	6 Divisions in 6 South Nyanza districts	500,000	2005	2012	US \$ 12.53 million	IFAD / GOK	72%
15	Njaa Marufuku Kenya (NMK)	Nation wide	-	2005	2015	Kshs 8 Billion	GOK	40%
16	Community Agricultural Development Project in Semi Arid Lands (CADSAL)	Five divisions in Keiyo and Marakwet districts	-	2005	2010	Kshs 120 Million	JICA / GOK	87%
17	Green Zones Development Support Project (GZDSP)	Nyayo tea zones in Central, Eastern, Rift valley and Western provinces	121,000	2006	2013	Kshs 1.3 Billion	ADB / GOK	45%

No.	Project Name	Location	Beneficiary population	Year Started	Year of Completion	Total cost of the project	Source of funds	Implementation status (% complete)
18	National Accelerated Agriculture Input Access Program (NAAIAP)	Country wide	2.5 million	2007	-	Kshs 2,093 Billion	World bank / FAO / EU / ADB / GOK	15%
19	Enhanced Food Security thro' Water Harvesting (EFSWH)	Country wide	-	2007	-	Kshs 214 Million	GOK	5%
20	2KR	-	-	-	-	-	JICA / GOK	-
21	Kenya Arid and Semi arid Lands Research program	-	-	-	-	-	EU / GOK	-

Source: Policy Directorate, MoA

3.2 Livestock Projects

3.2.1 Small holder Dairy Commercialization Programme

The project primary aim is capacity building for smallholder dairy producers and traders. It offers technical assistance and the preparation of re-structuring and strategic plans to enable full privatization of service providers.

3.2.2 ASAL - Based Rural Livelihoods Project

The specific objective of the project is to improve sustainable rural livelihoods and food security through improved livestock productivity, marketing and support for drought management and food security initiatives in the ASAL.

3.2.3 Integrated Livestock Disease and Pest Control Programme

This is a planned a 3-year integrated and comprehensive disease control programme where notifiable diseases in high and medium potential areas are to be eradicated at a cost of Kshs 600 million.

3.2.4 Establishment of Disease Free Zones (DFZ)

The process of creation of Disease Free Zones (DFZs) in Laikipia/Timau, North Rift and South Rift and at the Coast is already in place. Creation of DFZs is a also a key flagship project of the Vision 2030.

3.2.5 PATTEC project

The Pan African Tsetse and Trypanosomiasis Eradication Campaign project (PATTEC) was started in 2005 and activities are underway in 39 tsetse infested districts.

3.3 Economic Stimulus Programme (ESP)

The overall objective of the ESP as rolled out under the budget of the 2009/10 financial year was to cushion earmarked subsectors of the economy from recessionary forces triggered by both internal and external factors including the financial crisis and rising food prices.

In the agricultural sector, the programme was foremost targeted to increase availability and accessibility of maize and rice volumes whose results appear in Table 3.3. Secondly, it was to increase and stabilize the Strategic Grain Reserve (SGR) in the country. The specific objectives were,

- To increase the area under irrigation,
- To develop irrigation infrastructure,
- To increase employment opportunities in the production, processing and marketing and;
- To reduce the cost to consumers and increase the quality of products consumed locally.

Under the Programme, acquisition of assorted farm inputs were facilitated by the government during 2009/10 financial year at a cost of Kshs 193 Million. This programme was implemented through ministries of Agriculture, Water and Irrigation, Youth affairs and Sport and Regional Development. The programme is being implemented in irrigation schemes spread in 19 selected districts in the country with a total acreage of 14,020 ha of which 5,640 ha is for maize and 8,380 ha is devoted for rice cultivation. The ministry of Fisheries is also constructing fish ponds under the programme. The objective is to train 14,000 fish farmers on pond management and commercial fish farming, build 200 fish ponds per constituency in 140 constituencies country-wide and refurbish 15 Government Fish-Farms.

Table 3 3: Production Statistics (90kg bag of maize and 80kg bag of paddy rice)

No	Project	Institution	Crop	Target acres	Acres achieved	Target yield /acre	Actual yield/ acre	Target production Bags	Actual production Bags
1	Bura	NIB	Maize	5000	4800	25 bags		125,000	Not harvested
2	Hola	NIB	Maize	1,125	1240	25 bags	25 bags	28125	3000
3	Bura	NYS	Maize	3,000	432	25 bags		75,000	Not harvested
4	Hola	NYS	Maize	1375	20	25 bags		34,375	Not harvested
5	Perkerra	NIB	Maize	600	600	25 bags		15,000	Not harvested
6	TDIP	TARDA	Maize	2,500	550	25 bags		62,500	2500
7	Kibwezi	NIB	Maize	500	500	25 bags		12,500	Not harvested
TOTAL Acreage				14,100					
TOTAL Production (bags)				352,500	Estimated value Kshs 0.9 billion				
8	Ahero	NIB	Rice	3,000	2500	30 bags	25 bags	90,000	7500
9.	West Kano	NIB	Rice	2,250	2250	30 bags	25 bags	67,500	10,000
10	Bunyala	NIB	Rice	1200	1600	30,bags	25 bags	36,000	6000
11	Mwea	NIB	Rice	10,000	18000	30 bags	25 bags	300,000	75000
12	S W. Kano	NIB	Rice	3000	2000	30 bags		90,000	Not harvested
13	TDIP	TARDA	Rice	1,500	Nil	15 bags	Nil	22,500	Nil
TOTAL Acreage				20,950					
TOTAL Production (bags)				606,000	Estimated value Kshs 1.76 billion				

Source, MoA

4.0 WORLD COMMODITY AND FERTILIZER SITUATION

4.1 Cereals

Table 4.1 indicates that world cereal production is expected to decline slightly in 2009/010 but remains the second highest on record. Unlike in the last two years, the world cereal production as highlighted in Table 4.1 is projected to decrease by 46.8 million tons from 2,284.1 million tons in 2008/09 to 2,237.2 million tons in 2009/010. This is equivalent to a 2 percent decrease. A combination of a good outlook for production and relatively high carryover stocks from the previous season lessen the concern regarding the overall supply situation.

While world cereal utilization in 2009/010 is expected to grow faster than anticipated earlier, in part due to weak prices, the expansion would still allow for a small increase in the level of world cereals inventories which, by the close of the season ending in 2010, are forecast to reach eight years high. The overall improvement in the global supply and demand balance is also reflected in the ratio of world cereals stocks to utilization, an important indicator of global food security, which is expected to remain nearly unchanged from the previous season's above average level.

Consumption of cereals is expected to continue rising from 2,189.6 million tons in 2008/09 to 2,228.2 million tons in 2009/010, slightly below production by 0.4 percent. This will result in a corresponding build up in stocks leading to a year end world stocks increasing by 0.7 percent from 505.6 million tons in 2008/09 to 509.8 million tons in 2009/010.

Table 4 1: World Cereals Situation, 2004 – 2009 (million tons)

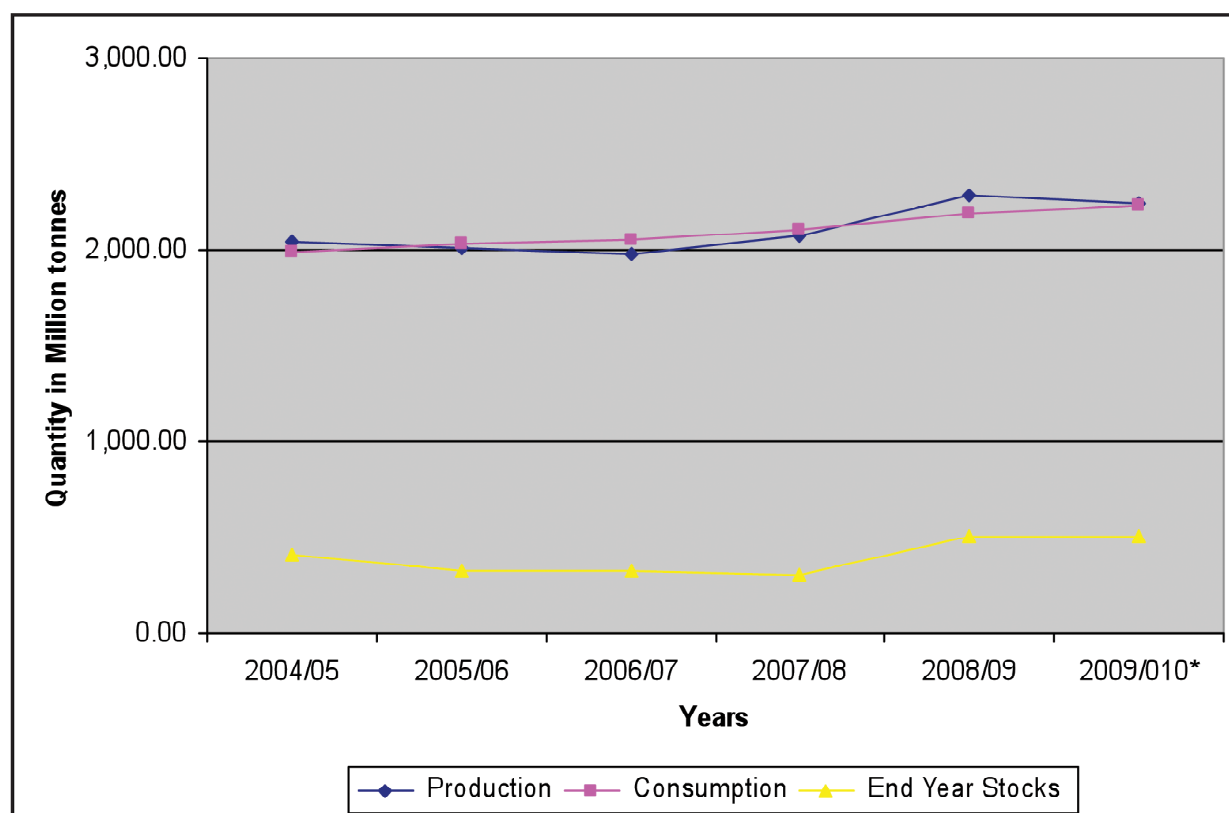
Year	2004/05	2005/06	2006/07	2007/08	2008/09	2009/010*
Wheat	628.56	620.13	592.02	603.59	681.4	678.6
Coarse grains	1,014.07	977.60	967.21	1051.91	1 143.1	1 108.7
Rice	400.47	416.28	415.27	420.63	459.6	450.8
Total Production	2,043.13	2,014.01	1,974.50	2,076.13	2,284.10	2,237.30
Wheat	610.05	624.42	618.16	618.97	647.6	665.3
Course grains	975.92	989.19	1,014.36	1,062.46	1 095.7	1 109.0
Rice	407.72	413.14	417.71	423.70	446.3	453.9
Total Consumption	1,993.69	2,026.75	2,050.22	2,105.13	2189.6	2228.2
Wheat	121.83	120.80	166.44	109.70	172.3	183.5
Course grains	117,98	119.28	81.29	125.97	208.9	205.2
Rice	78.15	81.29	78.25	72.07	124.4	121.1
Total End Year Stocks	414.98	321.37	325.98	307.74	505.6	509.8

Source: FAO, GIEWS

* Projections as at Feb.2010

The familiar upward trend on world cereals production since 2006/07 will be reversed in 2009/010 as demonstrated in Figure 4.1. Consumption has continued to grow over the same period and may level production in 2010 and as a result, the world market prices for cereals are expected to increase.

Figure 4 1: Trend in World Cereals Production Consumption and Stocks; 2004 - 2009



4.2 Wheat

Given the expectation of a near record wheat production, global wheat inventories are forecast to reach 183 million tons, 6 percent above their already high opening levels and the largest since 2003. Most of the anticipated increase in wheat stocks is expected in China, Kazakhstan, Ukraine and the United States. Total inventories held by other major exporters are forecast to reach 52 million tons, up 10 percent, or 5 million tons, from the previous season and the highest since 2006. As a result, closing stocks of major exporters, as a percentage of their total domestic utilization plus exports, another important indicator for global food security, are expected to rise by 20.4 percent, nearly 3 percent more than in the previous season and the highest in four years.

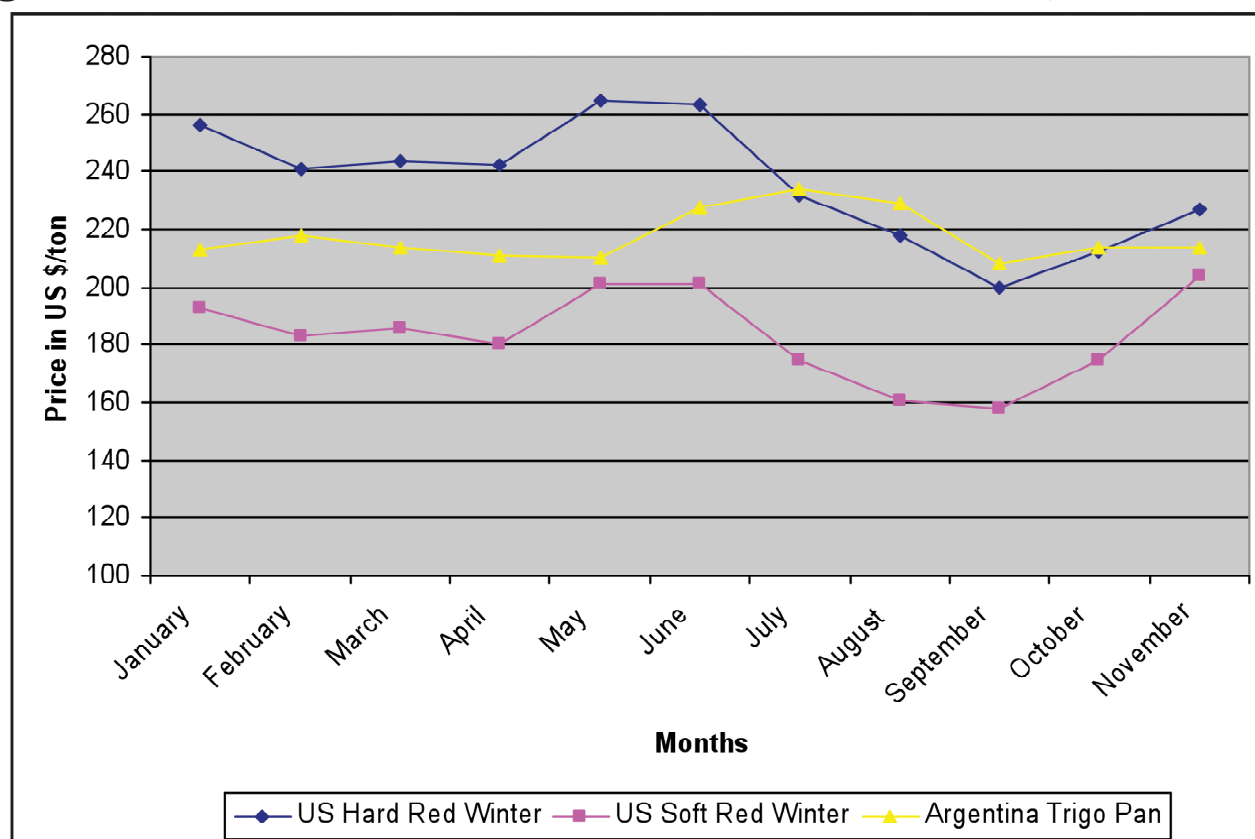
The anticipated higher supply of wheat will result in declining world wheat prices as shown in Table 4.2. In the US, for example, the annual average export prices for hard red winter wheat will reduce by 12.6 percent from US \$ 270 per ton in 2008/09 to US\$ 236 per ton in 2009/010. The price of the soft red winter wheat will also reduce by 9 percent from US\$ 201 in 2008/09 to US\$183 per ton in 2009/010.

Table 4 2: Selected International Prices for Wheat, 2005 – 2009 (US\$/ton)

Source	2005/06	2006/07	2007/08	2008/09	2009/010*
US Hard Red Winter	175	212	361	270	236
US Soft Red Winter	138	176	311	201	183
Argentina Trigo Pan	138	188	318	234	218

Sources: International Grain Council and USDA
Average for eleven months Jan 09 – Nov. 09

Figure 4 2: Trend in Selected International Prices for Wheat, Jan-Nov 2009



Source: FAO

4.3 Coarse Grains

FAO latest forecast for world production of coarse grains in 2009/010 stands at 1,109 million tons. This will be an increase from 1,143.1 million tons in 2008/09, which translates to 3 percent as shown in Table 4.1. It will still be the second largest crop in history and is attributed to improved yield prospects for maize in the United States, where generally, favorable weather lasted throughout the growing season. This year's crop is now forecast well above last year's level and close to 2007 record. South African region has a prospect of good harvest this year. With improved expectation for the United States' maize crop, world maize production in 2009/010 is forecast at almost 805 million tons, this is 1.7 percent down from 2008/09 season.

Regarding barley, the second most important coarse grain, the latest forecast points to a 4.5 percent decrease in global production in 2009/010, to 146 million tons. Significant decrease in North America and Europe has more than offset gains in the other main barley producing nations, particularly in the near east and North Africa. The forecast of world sorghum output in 2009/010 is put at 60 million tons, 8.5 percent down from the previous year's bumper harvest, largely on account of a significant reduction in production in the United States after two consecutive good years.

World utilization of coarse grains in 2009/010 is forecast to increase by 1.2 percent from the previous season. This compares with almost 2 percent growth in 2008/09. The deceleration in total utilization of coarse grain mainly stems from weaker demand from livestock sector along with a slower increase in the use of grains for production of ethanol.

All prices for coarse grains are expected to decline in 2009/010 season. The upward trend in maize prices sustained since 2005/06 as highlighted in Table 4.3 is expected to be reversed in 2009/010. This in response to increased production as indicated in Table 4.1. Price of US yellow maize is expected to decline from US\$ 188 per ton in 2008/09 to US\$ 166 per ton in 2009/010, an equivalent of 12 percent. The price of Argentina maize is also expected to reduce from US\$ 180 per ton in 2008/09 to US\$ 169 per ton in 2009/010.

Table 4 3: Selected International Prices of Coarse Grains, 2005 – 2009 (US\$/ton)

Source	2005/06	2006/07	2007/08	2008/09	2009/010*
US Yellow Maize	104	150	168	188	166
Argentina Maize	101	145	172	180	169
US Sorghum	108	155	181	170	158

Sources: *International Grain Council and USDA*
Average for eleven months Jan 09 – Nov. 09

4.4 Rice

The outlook for global rice production for 2009/010 has deteriorated considerably since July, following weather anomalies and natural disasters in several countries in Asia. Based on the latest information, the 2009/010 global paddy production is forecast at 672 million tons (450.8 million tons, milled), which would represent a 2.3 percent contraction from the record 688million tons (459.6 million tons, milled) harvested in 2008/09.

However, consumption will increase from 446.3 million tons to 454.9 million tons over the same period, representing an increase of 1.8 percent. The rice stocks at the close of 2009/010 marketing season are projected to stand at 121.1 million tons from 124.4 million tons registered in 2008/09.

Early forecast for rice trade in 2010, at 30.6 million tons, point at a slight increase from the 2009 estimate.

Exports may rebound in China and Thailand, amid abundant supplies, largely at the expense of India, which is expected to keep its tight restrictions on external sales, as well as Pakistan and Viet Nam.

Exports from Egypt, Brazil and Uruguay could fall. As for the world imports, the anticipated increase is expected to stem from larger deliveries to Nepal, the Philippines and countries in the near east.

After several months of slow but steady decline, international rice prices started rebounding in November 2007, coinciding with several announcements by the Philippines that it would bid for around 2 million tons of rice imports in various consignments. Despite the recovery, world rice price in November were some 12 percent lower than one year ago. Indeed, over the January – November period, the FAO all price index fell back by 15 percent, driven in particular by lower quotations for Indica, which lost ground on average by 35 and 24 percent for low quality and high quality respectively. Aromatic rice prices were also 8 percent weaker, but quotation of Japonica rice averaged 12 percent more than last year's. The trend is projected to continue 2009/010 season. For instant, price for Thai second grade rice is expected to decline by 16 percent over the same period.

Table 4 4: Selected International Prices for Rice, 2005 – 2009 (US\$/ton)

Source	2005	2006	2007	2008	2009*
Thai 100% B second grade	291	311	335	695	584
Thai broken	219	217	275	506	324
US Long grain	319	394	436	782	545
Pakistan Basmati	473	516	677	1,077	954
Indica	125	137	161	295	253
Japonica	127	153	168	314	344

FAO for indices. Rice prices

** Average: Jan – Nov. '09*

4.5 Cotton

Table 4.5 indicates that world cotton production will register a decline from 107.45 million bales in 2008/09 to 102.24 million bales in 2009/010. However, demand is expected to rise from 110.11 million bales to 115.7 million bales over the same period. Production is expected to reduce in China and Uzbekistan, but raised in Brazil and Turkmenistan. Demand is estimated to increase in Turkey, Vietnam, and the United States, but will be partially offset by a reduced demand in Pakistan,

which is based on a recent policy change to limit yarn exports. This is the third consecutive season of decline in global cotton production, the result of a decrease in price competitiveness of cotton versus competing crops, and also, in the last two seasons, of a weakening of cotton yields. World trade will be raised by 2 percent, reflecting higher imports by China, Turkey, and Vietnam, which more than offset a decrease for Pakistan. This has resulted in an interrupted price increase as depicted by figure 4.3. World stocks are projected to reduce by 18 percent from 62.42 million bales in 2008/09 to 51.41 in 2009/010. This would be the largest decline in stocks since 2002/03, and it is explained by the combination of lower production and rebounding consumption.

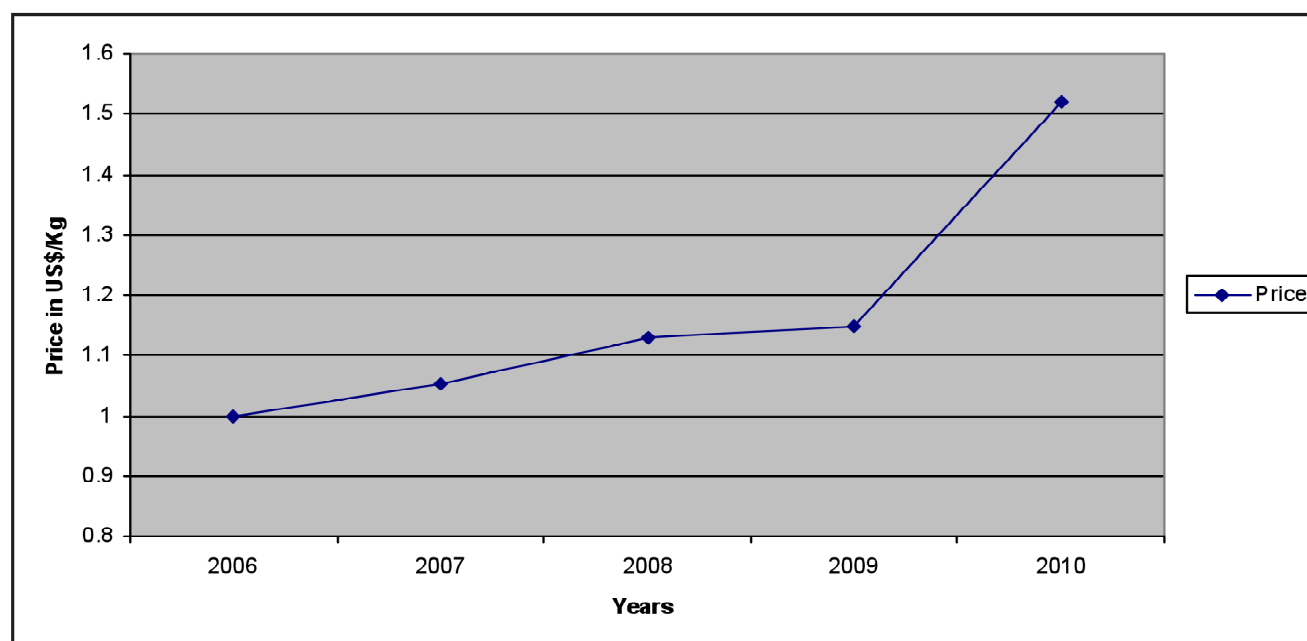
Table 4 5: World Cotton Situation, 2004 – 2010

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/010*
Production (Mil bales)	120.19	117.69	122.07	119.21	107.45	102.24
Consumption (Mil bales)	108.82	116.31	123.58	126.32	110.11	115.70
End of Year Stock (Mil bales)	53.94	60.18	60.71	57.33	62.42	51.41

Source: USDA – WASDE

*Projection as at March 2010

Figure 4. 3: Trend in Average World Cotton Prices 2006 – 2010



Source: International Cotton Advisory Committee

4.6 Sugar

According to the latest FAO forecast, after falling in 2008/09, world sugar production is expected to recover by 3.2 percent to stand at 159.7 million tons in 2009/010. The growth in production is attributed, generally, to favorable weather condition and higher prices expected to encourage farmers to apply more inputs. The bulk of expansion is expected to take place in the developing countries, where production is forecast to grow by 3.7 percent, as opposed to 1.8 percent in the developed countries. Despite a large world production, this will not be enough to cover the expected global consumption in 2009/010, marking the second consecutive year of a shortfall. The deficit between production and consumption is predicted to be around 3 million tons.

Notwithstanding drought conditions in several sugar producing countries, aggregate sugar production in Africa is set to reach 11.2 million tons in 2009/010, 400,000 tons or 3.7 percent above the previous year. The increase in output is largely due to area expansion and enhanced processing capacity. Strong domestic consumption growth and improved access to the European Union market under Everything But Arms (EBA) initiatives under the Economic Partnership Agreements (EPAs) are fostering large investment efforts for 20 least developed countries in the continent.

In South Africa, the largest sugar producer in the region, production is forecast at 2.4 million tons in 2009/010, up 3.4 percent from 2008/09 season, on account of improved crop husbandry, which should sustain yields. Sugar production in Egypt, the second largest sugar producer in Africa, is expected to stay at last year's level of 1.9 million tons as many farmers are expected to shift to the better paying cereal growing. However, sugar production may be boosted over the next three years by government support through large investments and increased sugarcane prices to farmers. Production in Sudan is forecast to increase to 1.1 million tons which is 21 percent more than 2008/09 production levels, given a significant expansion in processing capacity. There are plans to expand production to 10 million tons by 2015, with foreign direct investments from Gulf States and joint partnership initiatives with Egypt.

Expected gains are also forecast in Kenya, where production is set to grow by about 4 percent due to near normal rainfall in the western region of the country. In Mozambique, sugar output is expected to reach 400,000 tons, up by 24 percent from last season. Planted area is foreseen to expand by 37 percent in 2009/010. The resultant output will be processed by new processing infrastructure undertaken by the four sugar mills in the country. Below-average rainfall and limited input utilization, due to high fertilizer costs, are set to constrain production growth in the Tanzania below initial forecasts. The sugar sub-sector in that country is undergoing structural changes in response to improved market access to the European Union under EBA.

Table 4. 6: World Sugar Situation, 2004 – 2009

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/010*
Production in million tons	140.72	144.71	155.16	169	154.7	159.7
Consumption in million tons	142.79	142.82	146.03	161	160.9	162.6
Price in Kshs per ton	15,277.9	22,762	16,990	14,360.5	21120	29139
Ending Stocks (million tons)	34.16	30.97	30.91	67	68.4	-5.6

Source: USDA – WASDE, International Sugar Association

*Projection: Jan-November, 2010

World sugar consumption is expected to exceed production by 3.6 million tons 2008/09, leading to decline in world sugar stocks. Production is forecasted to increase by 4%. Since ethanol prices have reduced in the recent times as a result of sharp decline in world oil prices, sugar prices are expected to increase marginally. The major challenge facing the country's sugar sector is the ability to compete with cost efficient sugar producers within the Common Market for Eastern and Southern Africa (COMESA). Production costs in Kenya are still considered among the highest in the continent and output may decline in the years following full liberalization of the market, scheduled after 2012, unless much needed reforms are implemented to upgrade the industry.

4.7 Coffee

World coffee production has experienced mixed performance since 2007 when an impressive production of 7.7 million tons were recorded as indicated in Table 4.7. Production has declined from 7.6 million ton in 2008 to 7.4 million tons recorded in last year. This decline was occasioned by smaller than anticipated recovery in the production of some countries in Central America and Colombia and adverse weather conditions in Brazil. High cost of fertilizers and other inputs contributed to a reduction in their utilization in a number of producing countries. These factors affected the quality of coffee which resulted in lower prices recorded in 2009 as indicated in Table 4.6.

Table 4 7: Coffee Production by Exporting Countries, 2004 – 2009

	2004	2005	2006	2007	2008	2009
Total Production by exporting countries (Million tons)	6.9	6.7	7.7	7.1	7.6	7.4
Production in Kenya(Million tons)	0.044	0.04	0.05	0.04	0.034	0.047
Average composite price in Kshs per ton	114,664	157,274	168,520	189,516	218,680	196,914

Source: International Coffee Organization

4.8 World Fertilizer Situation

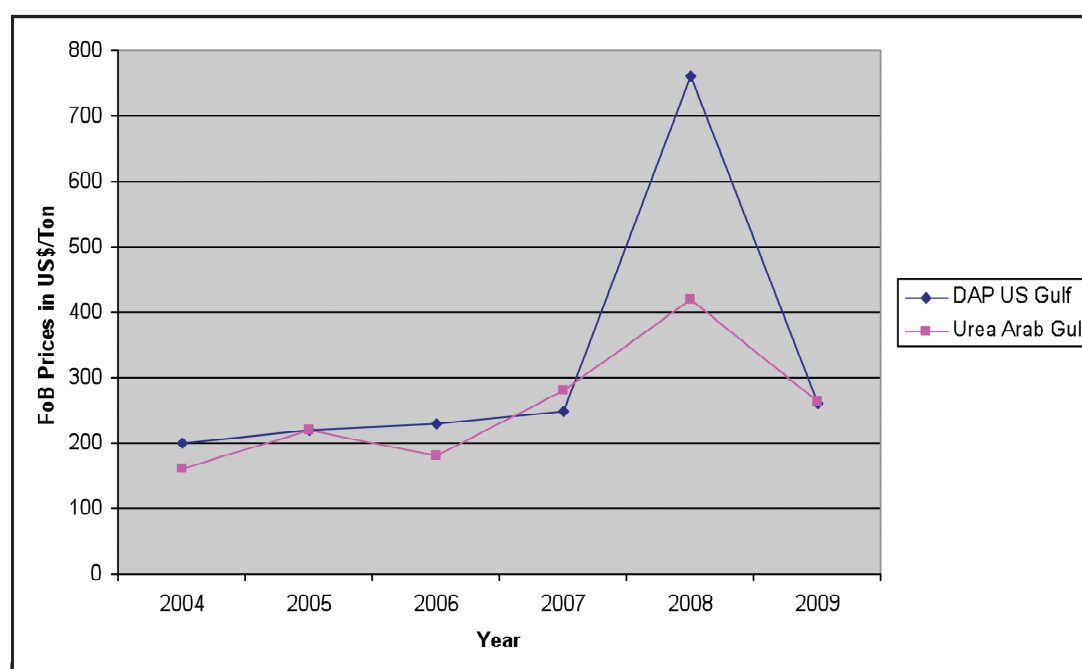
World fertilizer supply in 2009 was affected by the volatile conditions that prevailed in 2008. This year, global nutrient production and sales dropped to very low levels, due to the important inventory carry-overs in the worldwide distribution systems. For the second consecutive year, total world nutrient production in 2009 appeared to exceed sales and consumption, translating into a significant build-up of inventories at producers' ends. This weakness in demand impacted global nutrient production and industry's operating rates, but at a different intensity between the nutrients.

In the nitrogen sector, ammonia production was rather stable while urea output expanded moderately. Phosphate acid production declined marginally in 2009, while that of phosphate rock dropped. The world potash market collapsed in 2009, as international import demand dropped to its lowest level in the past 30 years. Potash production plunged in 2009, due to a combination of depressed demand worldwide and large stock carry-overs in key importing countries.

International trade levels in 2009 reflected trends in nutrient uses and the shift in imports between raw materials and finished products. The main changes in international imports were the collapse in potash shipments to China, firm sales of DAP to India, and a significant decline in urea import demand into the United States. India featured predominantly in the international markets in 2009, as the world's largest importer of urea, potash and DAP.

Consequently, Diammonium Phosphate (DAP) US Gulf price declined from all time high of US\$ 760 per ton in 2008 to US\$ 260 by 2009 as demonstrated in Figure 4.4. A price decline was also recorded for urea, from US\$ 420 to US\$ 263 over the same period.

Figure 4 4: Trend in some World Fertilizer Prices 2004 - 2009



5.0 SUB-SECTOR PERFORMANCES

5.1 Crops Sub-Sector

Table 5 1: Food Crops Production Statistics, 2005 – 2009

Crop	Indicator	Rift Valley	Nyanza	Eastern	Western	Coast	Central	North Eastern	Nairobi	Total
Maize	Crop Area	644,895	262,453	462,401	225,302	129,379	157,063	2,525	1,053	1,885,071
	Bags (90 Kgs)	13,225,039	3,711,215	3,903,141	4,163,878	1,079,383	1,047,879	5,520	6,420	27,142,475
	Yields (Bag/Ha)	20.5	14.1	8.4	18.5	8.3	6.7	2.2	6.1	14.4
Wheat	Crop Area	103,455	0	14,160	270	0	13,709	0	0	131,594
	Bags (90 Kgs)	1,509,961	0	552,495	7,050	0	367,172	0	0	2,436,678
	Yields (Bag/Ha)	15	0	39	26	0	27	0	0	19
Barley	Crop Area	0	0	3,500	0	0	194	0	0	3,694
	Bags (90 Kgs)	0	0	175,000	0	0	3,500	0	0	178,500
	Yields (Bag/Ha)	0	0	50	0	0	18	0	0	48
Beans	Crop Area	200,263	146,954	286,861	216,343	1,984	107,749	24	527	960,705
	Bags (90 Kgs)	1,019,109	1,081,360	1,914,515	689,397	13,844	450,664	141	1,666	5,170,696
	Yields (Bag/Ha)	5	7	7	3	7	4	6	3	5
Rice	Crop Area	0	6,411	0	1,132	1,571	12,635	80	0	21,829
	Bags (50 Kgs)	0	384,660	0	16,326	15,389	424,106	3,556	0	844,036
	Yields (Bag/Ha)	0	60	0	14	10	34	44	0	39
Sorghum	Crop Area	7,475	62,357	81,594	10,953	7397	659.3	2,737	0	173,172
	Bags (90 Kgs)	57,465	498,961	376,118	83,864	32,859	3,893	1,890	0	1,055,051
	Yields (Bag/Ha)	8	8	5	8	4	6	1	0	6
Irish Potatoes	Crop Area	222,620	97,320	144,774	108,313	657	141,736	5	687	716,112
	Bags (110 Kgs)	1,429,217	397,092	1,029,232	435,893	3,285	1,992,930	10	3,492	5,291,151
	Yields (Bag/Ha)	6	4	7	4	5	14	2	0	7

Crop	Indicator	Rift Valley	Nyanza	Eastern	Western	Coast	Central	North Eastern	Nairobi	Total
Millet	Crop Area	9,289	22,169	67,709	4,833	364	112	100	0	104,576
	Bags (90 Kgs)	65,282	199,648	334,109	25,654	1,921	191	50	0	626,856
	Yields (Bag/Ha)	7	9	5	5	5	2	1	0	6
Green Grams	Crop Area	0	4,275	103,299	646	4,279	337	162	0	112,997
	Bags (90 Kgs)	0	12,824	432,049	3,302	20,671	1,366	161	0	470,372
	Yields (Bag/Ha)	0	3	4	5	5	4	1	0	4
Pigeon Peas	Crop Area	0	0	116,482	0	503	1,173	0	9	118,167
	Bags (90 Kgs)	0	0	511,113	0	2,521	2,728	0	15	516,377
	Yields (Bag/Ha)	0	0	4	0	5	2	0	2	4
Sweet Potatoes	Crop Area	3,034	52,528	4,527	14,044	771	2,880	0	37	77,821
	Tons	29,266	487,990	40,931	443,859	5,544	26,321	0	294	1,034,204
	Yields (Bag/Ha)	10	9	9	32	7	9	0	8	13
Cassava	Crop Area	1,138	26,460	15,655	13,821	12,715	613	0	24	70,426
	Tons	8,118	312,928	109,155	293,317	181,295	6,150	0	112	911,074
	Yields (Bag/Ha)	7	12	7	21	14	10	0	5	13
Arrow Roots	Crop Area	0	0	527	398	38	1,570	0	55	2,588
	Tons	0	0	3,256	8,225	247	12,918	0	256	24,901
	Yields (Bag/Ha)	0	0	6	21	6	8	0	5	10
Yams	Crop Area	0	0	572	0	0	309	0	0	882
	Tons	0	0	3,700	0	0	727	0	0	4,427
	Yields (Bag/Ha)	0	0	6	0	0	2	0	0	5
Soya Beans	Crop Area	0	212	0	1,285	0	32	0	0	1,529
	Bags (90 Kgs)	0	1,355	0	13,505	0	100	0	0	14,960
	Yields (Bag/Ha)	0	6	0	11	0	3	0	0	10
Ground Nuts	Crop Area	0	30,039	1,162	3,831	0	0	0	0	35,032
	Bags (90 Kgs)	0	153,495	6,506	25,647	0	0	0	0	185,648
	Yields (Bag/Ha)	0	5	6	7	0	0	0	0	5

Source: Crops Directorate

5.1.1 Maize

Maize production which is the country's staple food item, increased marginally by 3.2 per cent to record a total of 27.1 million bags in 2009 from an area of 1.9 million ha slightly higher than the 26.3 million bags from 1.8 million ha in 2008. Better volumes were occasioned by access to subsidized fertilizers, improved utilization of certified seeds and generally good and well spread rains especially in highlands East of Rift valley. Yields per ha however remained low at about 14.4 bags per ha. Again production volumes still remain well below the projected consumption level of 36.0 million bags in 2009 thus necessitating imports to cover the deficit. The highest production was last recorded for 2006 at 36.1 million bags as Table 5.2 demonstrates.

Table 5 2: Maize Production 2005-2009

Year	2005	2006	2007	2008	2009*
Area (ha)	1,760,618	1,888,185	1,615,304	1,793,757	1,885,071
Production					
90 kgs bags	32,423,963	36,086,406	32,542,143	26,302,219	27,142,475
Tons	2,918,157	3,247,777	2,928,793	2,369,569	2,442,823
Unit price per bag (Kshs)	1,363.0	1,300.0	1,200.0	2,500.0	2,614.0
Average Yield (bags/ha)	18.0	19.0	20.1	14.7	14.4
Consumption (90 bags)	32,120,000	33,105,000	34,098,150	36,000,000	36,000,000
Exports (tons.)	-	-	-	-	-
Import (tons.)	49,621.0	-	-	-	-
Total Value (billion Kshs)	44.2	46.9	52.3	65.8	71.0

Source: Directorate of Crops

*Provisional Reference Food Balances

5.1.2 Wheat

Wheat production declined in the 2009 season to register 1.3 million bags though the area under the crop increased by 1 per cent to reach the highest record of 131,594 ha in the year under review. More specifically, production has been on the decline since 2005 dropping from 4.1 million bags in 2005 to as low as 2.4 million bags in 2009 as shown in Table 5.3. The trend can be attributed to various factors among them being erratic climatic conditions, unpredictable producer prices, pests and high input prices.

Table 5 3: Wheat Production 2005 - 2009

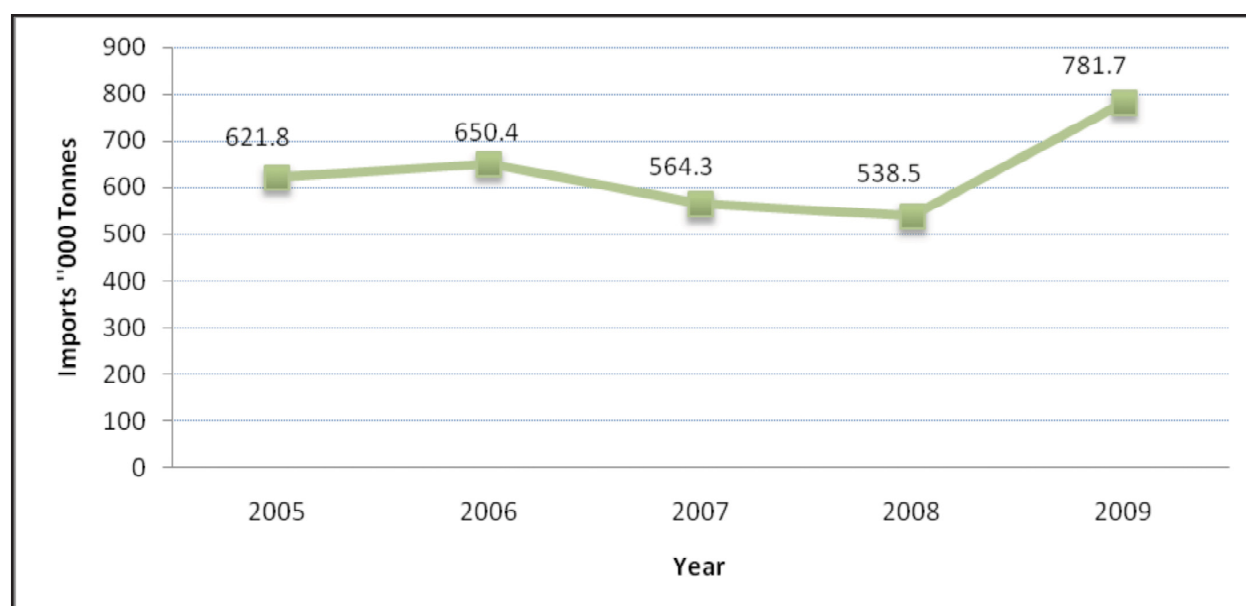
Year	2005	2006	2007	2008	2009*
Area (ha)	159,477	150,488	104,176	130,273	131,594
Production					
90 kgs bags	4,063,294	3,978,454	3,936,105	3,737,241	2,436,678
Tons	365,696	358,061	354,249	336,688	219,301
Unit price per bag (Kshs)	1,639	1,714	3,000	2,600	3,571
Average Yield (bags/ha)	25.00	26.00	28.00	11.32	18.5
Consumption (90 bags)	893,120	903,120	892,000	853,000	1,072,000
Import (tons.)	621,839	650,400	564,300	538,500	781,700
Total Value Production (billion Kshs)	6.66	6.82	10.03	11.20	8.70

Source: Directorate of Crops

*Provisional

5.1.3 Wheat Imports, (2005 - 2009)

Wheat import volumes have been on the rise since 2008 when imports were recorded at 538,500 tons; the lowest in the series. Thus at 781,700 tons, 2009 represents an increase of 45 per cent compared with 2008 as shown in Table 5.1.

Figure 5 1: Wheat Production and Imports, (2005 - 2009)

Source: Economic Survey, 2010

Production

5.1.4 Beans

Overall production of beans witnessed a dramatic turn-around in 2009 rising by 78.2 per cent to 5.2 million bags from 2.9 million bags in 2008 as shown in Table 5.4. Apart from improved short rains in the eastern and coastal regions, the area under the crop also increased by 57.4 per cent to 960,705 ha when compared to 2008.

Table 5 4: Beans Production 2005-2009

Year	2005	2006	2007	2008	2009*
Area (ha)	1,034,477	995,391	846,327	610,428	960,705
Production					
90 kgs bags	4,175,772	5,908,887	3,455,512	2,901,237	5,170,696
Tons	375,820	531,800	383,900	261,137	465,363
Unit price per bag (Kshs)	2,500	2,540	4,400	4,500	5,134
Average Yield (bags/ha)	4.0	6.0	4.8	2.0	5.4
Consumption (tons)	400,450	460,000	524,400	260,000	390,000
Total Value (billion Kshs)	10.44	18.02	16.29	13.10	26.54

Source: Directorate of Crops*Provisional

5.1.5 Sorghum

Production of sorghum increased by a dramatic 75 percent from 602,910 bags in 2008 to 1,055,051 bag in 2009 with some slight improvement on the yield per ha to 6.09 bags; much lower though when compared with the 14.0 bags/ha recorded in 2005 as Table 5.5 demonstrates. The area under the crop also registered an increased acreage to achieve 173,172 ha in the year under review from 104,041 ha in 2008. The achievement is attributed to rising land area dedicated to the crop on account of being drought resistant and hence a primary poverty eradication vehicle especially in marginal areas.

Table 5 5: Sorghum Production, (2005 - 2009)

Year	2005	2006	2007	2008	2009*
Area (ha)	122,368	163,865	155,550	104,041	173,172
Production					
90 kgs bags	1,668,081	1,457,503	1,637,391	602,910	1,055,051
Tons	150,127	131,188	147,365	54,316	94,955
Unit price per bag (Kshs)	1,700	1,254	1,100	1,230	3,285
Average Yield (bags/ha)	14.00	9.00	9.10	5.80	6.09
Consumption (bags)	1,425,000	1,510,000	1,551,525	366,667	900,000
Total Value (billion Kshs)	2.8	1.8	1.6	0.7	3.5

Source: Directorate of Crops

*Provisional

5.1.6 Millet

Millet, like sorghum is drought tolerant and thrives well in the marginal areas of Eastern and Nyanza provinces. Eastern province has the highest potential. The area under the crop increased significantly from 53,155 ha in 2008 to 74,339 ha in 2009 yielding 626,856 bags up from 426,928 bags the previous year. However, yield per ha has fallen since 2007 as shown in Table 5.6.

Table 5 6: Millet Production, (2005 - 2009)

Year		2005	2006	2007	2008	2009*
Area (ha)		92,430	137,711	128,114	53,155	104,576
Production						
	90 kgs bags	660,900	879,995	1,328,877	426,928	626,856
	Tons	59,481	79,207	119,599	38,462	56,417
Unit price per bag (Kshs)		2,400	1,700	2,600	2,700	4,680
Average Yield (bags/ha)		7.00	6.40	7.30	8.00	6.0
Consumption (bags)			533,333	800,000	255,556	444,444
Total Value (billion Kshs)		1.59	1.50	2.50	1.20	2.93

Source: Directorate of Crops

*Provisional

5.1.7 Rice

The production of rice almost doubled from 437,628 bags in 2008 to 844,036 bags in 2009 with the area under the crop also rising by 30 per cent to peak at 21,829 ha. Production volumes however remain well below the 2005 peak level of 1,158,829 registered in 2005. Price per bag also seems to have consistently fallen from the peak of Kshs 3,500 per bag in 2006 as shown in Table 5.7.

Table 5 7: Rice Production 2005-2009

Year		2005	2006	2007	2008	2009*
Area (ha)		15,940	23,106	16,457	16,734	21,829
Production						
	50 kgs bags	1,158,829	1,296,811	945,118	437,628	844,036
	Tons	57,942	64,840	47,256	21,881	42,202
Unit price per bag (Kshs)		3,400	3,500	2,650	2,745	
Average Yield (bags/ha)		72.70	56.12	53.00	26.20	38.7
Consumption		279,800	286,000	293,722	210,000	410,000
Import (tons)		228,206	196,000	203,000	202,000	398,000
Total Value (billion Kshs)		0.90	3.30	2.70	-	

Source: Directorate of Crops

*Provisional

5.1.8 Cowpeas

The crop registered significant increases of 25 per cent up from 532,810 bags in 2008 to 668,361 bags in 2009. However, the area under the crop declined by 16 per cent to reach 124,302 ha in 2009. Yield per ha however increased to 5.4 bags as shown in Table 5.8.

Table 5 8: Cowpeas Production 2005-2009

Year	2005	2006	2007	2008	2009*
Area (ha)	72,654	161,971	130,163	148,157	124,302
Production					
90 kgs bags	402,684	975,551	925,015	532,810	668,361
Tons	36,242	87,808	83,251	47,958	60,152
Unit price per bag (Kshs)	2,000	2,550	2,900	3,100	5,503
Average Yield (bags/ha)	6.00	6.00	6.60	3.60	5.38
Total Value (billion Kshs)	1.45	4.25	2.30	1.65	3.68

Source: Directorate of Crops

*Provisional

5.1.9 Green Gram

Green gram production rose by 58 percent to 470,372 bags in 2009 up from 296,808 bags in 2008. Despite better supplies, price per bag was slightly over Kshs 6,000 after remaining flat in 2007-8 as shown in Table 5.9.

Table 5.9: Green Grams Production 2005-2009

Year	2005	2006	2007	2008	2009*
Area (ha)	87,510	102,882	82,784	91,452	112,997
Production					
90 kgs bags	365,458	482,212	688,363	296,808	470,372
Tons	32,891	43,399	61,953	26,715	42,333
Unit price per bag (Kshs)	4,680	3,266	5,000	5,000	6,149
Average Yield (bags/ha)	4.00	5.00	5.50	3.20	4.16
Total Value (billion Kshs)	1.71	1.57	3.41	1.48	2.89

Source: Directorate of Crops

*Provisional

5.1.10 Pigeon Peas

Pigeon Peas production was a great contrast with other food crops registering a dramatic drop to 516,377 bags in 2009 compared with about 2.9 million bags in 2008. As shown in Table 5.10 the area under the crop fell almost six-fold during the period.

Table 5 10: Pigeon Peas Production 2005-2009

Year	2005	2006	2007	2008	2009*
Area (ha)	1,034,477	995,391	846,327	610,428	118,167
Production					
90 kgs bags	4,175,772	5,908,887	3,455,512	2,901,237	516,377
Tons	375,820	531,800	383,900	261,137	46,474
Unit price per bag (Kshs)	2,500	2,540	4,400	4,500	
Average Yield (bags/ha)	4.00	6.00	4.80	2.00	4.37
Consumption (bags)	400,450	460,000	524,400	-	-
Total Value (billion Kshs)	10.44	1,802.00	16.29	13.10	

Source: Directorate of Crops

*Provisional

5.1.11 Sweet Potatoes

The tuber registered an increased production to hit 1,034,204 tons in 2009 from 894,781 tons in 2008 with the area under the crop also increasing marginally to register 77,821 ha in the year under review from 62,786 ha in 2008. Production has therefore almost doubled since 2005 as shown in Table 5.11.

Table 5 11: Sweet Potatoes Production 2005-2009

Year	2005	2006	2007	2008	2009*
Area (ha)	61,300	74,937	61,111	62,786	77,821
Production					
Tons	671,709	724,646	811,531	894,781	1,034,204
Average Yield (tons/ha)	11.00	9.60	10.30	14.30	13.3
Unit price per 100 Kg bag (Kshs)	1,420	1,460	1,750	1,650	2,356
Consumption (tons)		652,000	73,000	805,000	84,000
Total Value (billion Kshs)	9.54	4.70	8.33	7.50	

Source: Directorate of Crops

*Provisional

5.1.12 Cassava

Cassava production was 911,074 tons in 2009 from 750,964 tons in 2008 with the area under the crop also increasing by about 30 percent to 70,426 ha in the year under review from 54,674 ha recorded in 2008. Total earnings have ranged from 3.7 billion in 2005 to a high of 5.3 billion in 2008 as shown in Table 5.12.

Table 5 12: Cassava Production 2005-2009

Year	2005	2006	2007	2008	2009*
Area (ha)	68,320	68,502	53,610	54,673	70,426
Production					
Tons	566,400	656,633	397,705	750,964	911,074
Average Yield (tons/ha)	8.0	9.6	8.7	13.7	12.9
Unit price per ton (Kshs)	6,500	6,500	10,000	9,000	-
Total Value (billion Kshs)	3.70	4.30	5.60	5.30	-

Source: Directorate of Crops

*Provisional

5.1.13 Arrow Roots

The crop is grown mainly in the central and upper eastern region. The tuber registered an increased production to 24,901 tons in 2009 from 16,872 tons in 2008 and a corresponding better yield of 9.62 tons per ha as Table 5.12 demonstrates.

Table 5.13: Arrow Roots Production 2005-2009

Year	2005	2006	2007	2008	2009*
Area (ha)	2,332	3,144	1,896	2,254	2,588
Production					
Tons	27,326	22,846	16,050	16,872	24,901
Unit price per bag (Kshs per 100 Kg bag)	970	1,020	3,342	3,400	-
Average Yield (tons/ha)	11.00	8.00	7.70	7.49	9.62
Total Value (billion Kshs)	0.27	0.23	0.26	0.28	-

Source: Directorate of Crops

*Provisional

5.1.14 Yams

Production of yams registered a drop from 6,123 tons in the previous year to a lower 4,427 tons depicting a consistent decline since 2006. Area under the crop has at the same period remained almost flat averaging 858 ha as shown in Table 5.13.

Table 5. 14: Yam Production 2005-2009

Year	2005	2006	2007	2008	2009*
Area (ha)	835	842	925	808	882
Production					
Tons	7,238	8,001	6,905	6,123	4,427
Average Yield (tons/ha)	9.00	9.50	7.50	7.60	-

Source: Directorate of Crops

*Provisional

5.2 Industrial Crops

The main industrial crops include tea, coffee, sugar, pyrethrum, cotton and sisal and represent a significant portion of the country's production, export and import volumes as demonstrated in Figure 5.2. Tea for instance is still one of the leading foreign exchange earners. Its production in 2009 was however 314,198 tons representing a decline of about 9 percent when compared to 345,817 tons recorded in 2008. In the same year coffee production recorded an all time high of 54,020 metric tons compared to 45,245 metric tons in 2005 but much below the levels of the 1970s-1990s.

5.2.1 Tea

Tea is still one of the leading foreign exchange earners in Kenya. Area under the crop rose marginally from 157,720 ha in 2008 to 158,394 ha in 2009 as shown in Table 5.1. Tea production for the year 2009 stood at 314,198 tons; 9 percent lower compared to 345,817 tons recorded in 2009. Lower output for 2009 was attributed to prolonged dry weather conditions experienced in tea growing regions of East of Rift Valley during the first quarter of the year and poorly distributed rainfall during the second quarter of the year.

Table 5 15: Tea Production, 2005 – 2009

Year		2005	2006	2007	2008	2009*
Estates	Area (ha)	48,600	51,300	51,011	50,605	51,126
Production	Tons	130,800	119,401	139,992	134,963	141,593
	Yield (tons/ha)	2.7	2.3	3.1	2.8	2.9
Small Holders	Area (ha)	92,700	95,780	98,185	107,115	107,268
Production	Tons	197,700	191,177	229,614	210,854	172,605
	Yield (tons/ha)	2.1	2	2.6	2.4	1.9
Total Area (ha)		141,300	147,080	149,196	157,720	158,394
Total Production (tons)		328,500	310,578	369,606	345,817	314,198
Auction Price of Black Tea (USD per 100 kg)		157	203	176	233	272
Consumption (tons)		14,025	16,549	17,643	17,387	18,102
Exports (tons)		349,738	313,720	345,877	383,444	342,482
Exports (million Kshs.)		42,862.90	47,297.40	43,146.40	62,199.60	69,603.20

Source: Tea Board of Kenya

The average tea auction price increased by 39 US\$ per 100 Kgs from 233 US\$ recorded in 2008 to 272 US\$. The increase in auction was largely attributed to lower supplies of tea occasioned by dry weather conditions. Meanwhile, local tea consumption for 2009 stood at 18,102 tons 4 percent higher compared to 17,387 tons recorded in 2008 driven mainly by local generic promotion campaigns by the Tea Board aimed at sensitizing consumers on the health benefits associated with tea consumption. The promotions were positively supplemented to Brand promotion by the Tea Packers. Total export volume for the year 2009 stood at 342,482 tons; 10 percent lower compared to 383,444 tons recorded in the year 2008. Total export earnings rose by 11 percent from Kshs 62 Billion to Kshs 69 Billion.

5.2.1 Tea Export Destination

As shown in table 5.16 and Figure 5.2, Egypt maintained the leading export destination for Kenyan tea for the second year in a row importing 75,392 tons of tea and thus accounting for 22 percent of the total tea export volume. Other key export destinations for Kenyan tea included UK with 64,179 tons, Pakistan (54,639 tons), Afghanistan (33,443 tons), and Sudan (25,477 tons). The five export destinations accounted for 73 percent of the tea export volume.

Specifically, Afghanistan and Sudan were the only markets that recorded growth in tea imports from Kenya at 29 percent and 10 percent respectively. However, exports were recorded in six new markets, namely; Eritrea, Ethiopia, Zimbabwe, Argentina, Latvia and Tanzania owing to increased seasonal demand.

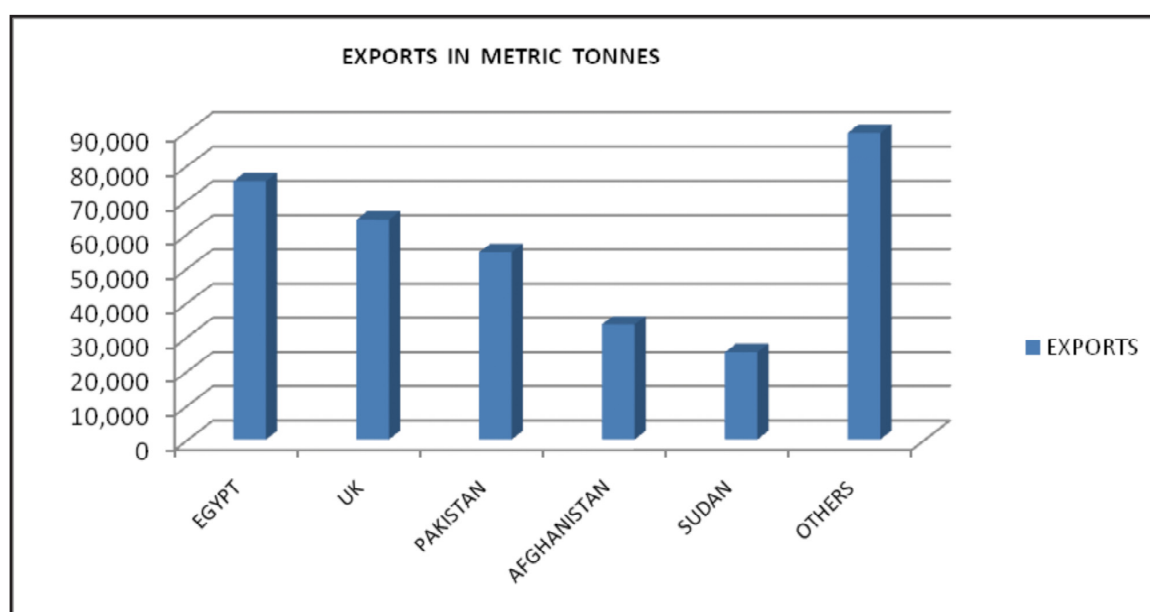
Table 5 16: Distribution of Tea Export Destinations, 2009

DESTINATION	QUANTITY KGS	VALUE KSHS	UNIT VALUE KSHS
EGYPT	75,391,513	14,371,886,987.4	190.6
UK	64,179,439	12,285,639,293.9	191.4
PAKISTAN	54,638,689	11,385,305,318.3	208.4
AFGHANISTAN	33,443,074	7,548,698,939.7	225.7
SUDAN	25,476,533	4,220,583,053.2	165.7
RUSSIA	13,518,878	2,798,338,924.2	207.0
YEMEN	13,330,704	3,077,570,938.2	230.9
U.A.E	12,782,620	2,729,815,308.6	213.6
KAZAKHSTAN	9,122,806	2,417,577,601.2	265.0
POLAND	4,623,521	969,393,131.9	209.7
NIGERIA	3,774,397	820,286,844.3	217.3
INDIA	3,691,388	729,742,823.7	197.7
IRELAND	3,154,416	760,626,831.6	241.1
U.S.A.	3,003,504	921,402,636.0	306.8
SRI LANKA	2,940,539	572,325,672.0	194.6
SOMALIA	2,714,317	214,605,974.5	79.1
JAPAN	2,107,048	875,062,330.7	415.3
IRAN	1,911,193	424,439,264.6	222.1
DJIBOUTI	1,507,111	138,511,235.3	91.9
INDONESIA	1,435,674	294,834,600.3	205.4
CANADA	1,177,704	210,275,788.0	178.6
SAUDI ARABIA	1,094,104	252,340,667.2	230.6
CHINA	918,140	237,821,186.3	259.0
TURKEY	878,091	212,033,706.2	241.5
OMAN	872,108	88,948,332.9	102.0
SOUTH AFRICA	860,967	160,969,587.3	187.0
GERMANY	750,637	145,097,421.3	193.3
NETHERLANDS	682,546	114,441,636.0	167.7

DESTINATION	QUANTITY KGS	VALUE KSHS	UNIT VALUE KSHS
UKRAINE	648,982	131,484,040.5	202.6
MALAYSIA	594,951	157,850,979.2	265.3
CHILE	279,102	64,506,059.1	231.1
PUERTO RICO	233,184	54,103,088.2	232.0
SINGAPORE	153,605	65,138,019.2	424.1
ERITREA	118,820	28,727,115.2	241.8
ITALY	105,000	45,660,186.6	434.9
ERITREA	98,000	21,848,719.1	223.0
NEW ZEALAND	50,600	11,730,987.7	231.8
FINLAND	42,460	10,393,890.1	244.8
ETHIOPIA	29,150	2,026,654.4	69.5
ZIMBABWE	25,452	2,283,890.3	89.7
KYRGYZSTAN	25,300	5,108,804.0	201.9
ARGENTINA	24,280	4,268,096.0	175.8
TAIWAN	21,160	3,799,433.6	179.6
AUSTRALIA	20,500	4,604,628.0	224.6
LATVIA	11,840	1,842,943.0	155.7
BRAZIL	9,000	6,089,700.0	676.6
TANZANIA	8,500	3,222,601.0	379.1
GRAND TOTAL	342,481,547	69603265869.9	203.2

Source: Tea Board of Kenya

Figure 5 2: Kenya's Tea Export Destinations, 2009



Source: Tea Board of Kenya

5.2.2: Coffee

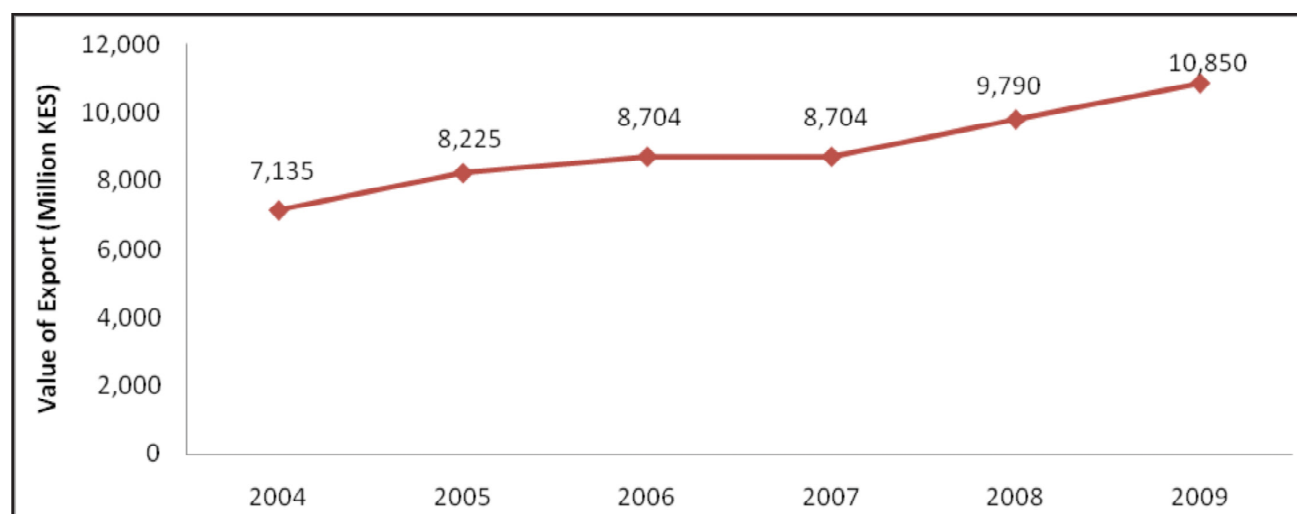
Coffee production recovered from the 2008 decline to peak at 54,020 metric tons in 2009 as Table 5.16 shows. This was comparable to the 2007 season when production was 53,368 metric tons. About 54 percent of the production was attributed to the Small-holders where yields per ha was still about half of that of the Estates. Export earnings also rose marginally to reach Kshs 10.9 billion as demonstrated in Figure 5.4.

Table 5 17: Coffee Production, 2005 - 2009

Year		2005	2006	2007	2008	2009
Production-Estates	Area (ha)	42,000	42,000	42,000	40,680	53,344
	Tons	20,745	21,257	21,257	19,740	24,650
Production- Small Holders	Area (ha)	128,000	128,000	128,000	122,040	106,656
	Tons	24,500	27,046	27,046	22,260	29,370
Yield (tons/ha) Total crop area (ha)	Estate	0.5	0.5	0.5	0.5	0.5
	Small scale	0.2	0.2	0.2	0.2	0.3
Total crop area (ha)		170,000	170,000	170,000	162,720	160,000
Total Production (tons)		45,245	48,303	53368	42,000	54,020
Price of processed coffee (per 100 kg)		11,824	10,952	10,952	-	-
Local Consumption (tons)		1,810	1,932	1,932	1,680	1,341
Exports (million Kshs.)		8,225	8,704	8,704	9,790	10,850
Total Value (billion Kshs.)		8.33	8.7	8.7	-	-

Source: Coffee Board of Kenya

Figure 5 3: Trends in Coffee Exports (2004 - 2009)



Source: Coffee Board of Kenya

5.2.3: Sugar

Total sugarcane production in 2009 was 548,207 tons compared to 517,667 tons in 2008, an increase of 6 percent as shown in Table 5.18 thus representing the highest production ever realized in the sugar industry. Sugar sales went up by 5 percent to 546,361 tons in 2009 from 520,315 tons sold in 2008. Cane deliveries in 2009 increased to 5,610,702 tons from 5,125,821 tones delivered in 2008, equivalent to a 9 percent increase. In the same period, domestic sugar prices rose by a significant 50 percent to Kshs 78.32 per Kg up from Kshs. 52.24 per Kg in 2008.

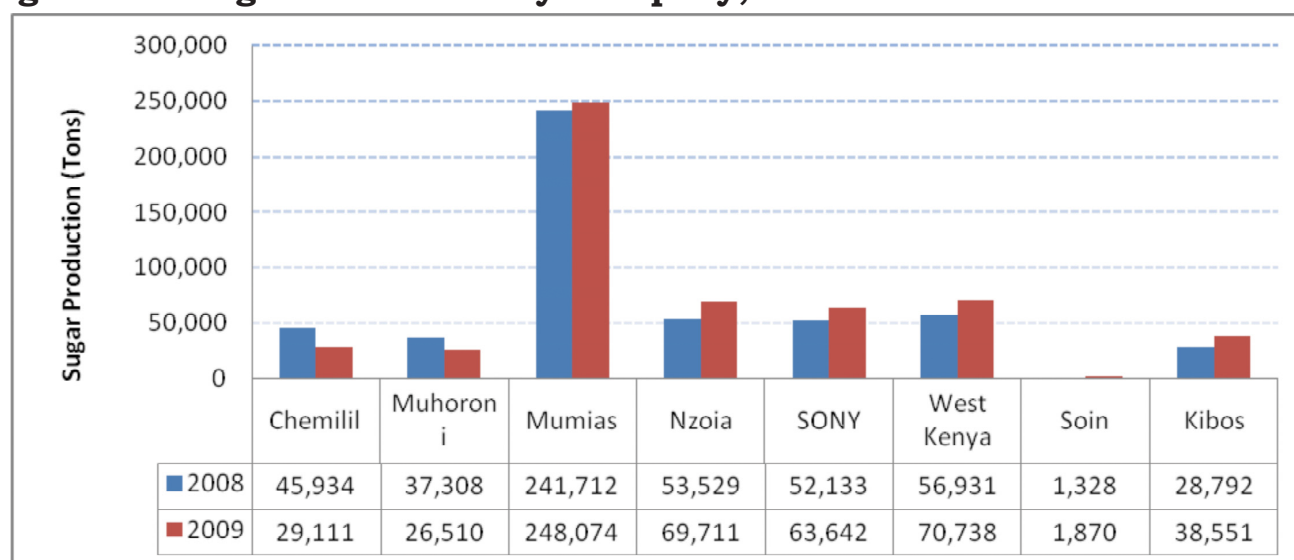
Table 5 18: Sugar Production, 2005 – 2009

Year		2005	2006	2007	2008	2009
Area (ha)	Under Cane	144,765	147,730	158,568	169,421	154,298
	Harvested	56,537	54,621	59,201	54,465	65,774
Cane Production (tons)		4,800,820	4,932,839	5,204,214	5,176,670	5,610,702
Yield (cane)-(Tons/ha)		84.9	90.3	87.9	95.0	85.3
Price of Cane (Kshs /ton)		1,910	2,027	2,249	2,400	2,761
Sugar Production (ton)		488,997	475,670	520,404	517,667	548,208
National Consumption (tons)		695,622	718,396	741,190	751,523	605,358
Domestic Price of Sugar (Kshs/ton)		48,449	52,547	57,063	52,240	78,320
Exports (tons)		21,760	13,533	20,842	27,900	1,952
Imports (tons)		167,235	166,280	230,011	218,607	184,530
Value of Imports (Kshs Million)		4,048	4,801	7,299	6,885	-

Source: Kenya Sugar Board

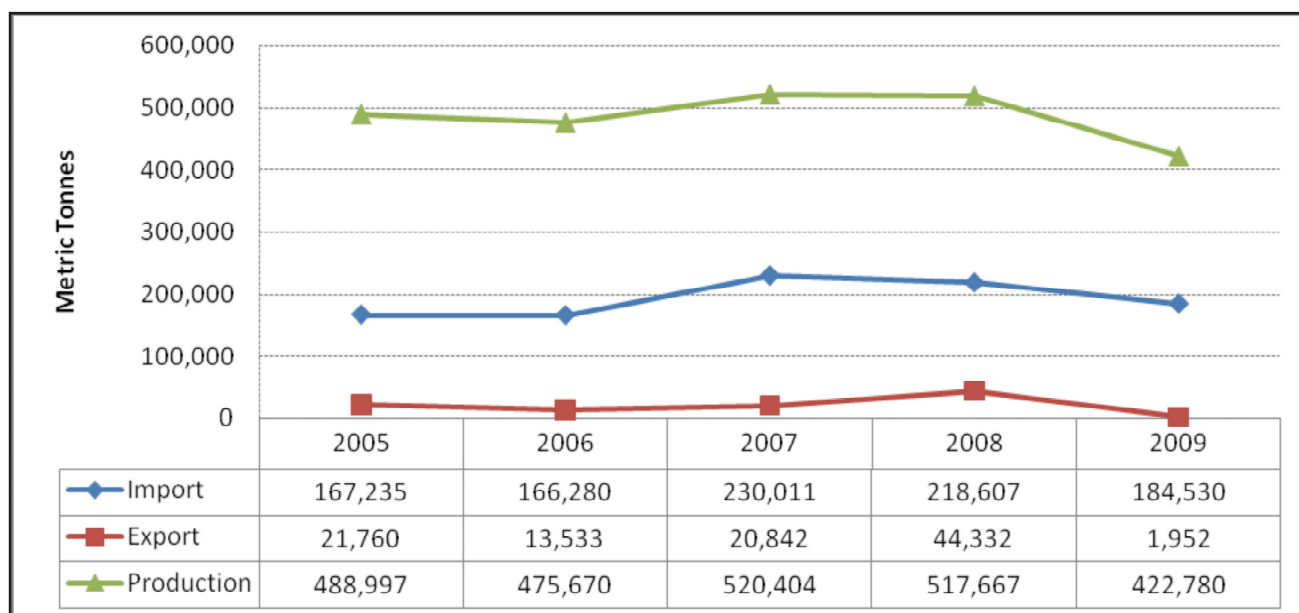
Mumias maintained its production lead in the industry with Kibos and Soin holding the tail-end as demonstrated in Figure 5.4.

Figure 5 4: Sugar Production by Company, 2009



Source: Kenya Sugar Board

Figure 5 5: Trends in Sugar Production, Export and Imports, 2005- 2009



Source: Kenya Sugar Board

5.2.4: Cotton

Cotton production in 2009 was 14,886 metric tons decreasing marginally from 15,093 metric tons realized in 2008. The area under production fell by 7 per cent to 39,963 ha from 43,035 ha over the same period. Productivity rose marginally to 370kg/ha up from 350Kg/ha in 2008 but well below the peak of 690kg/ha recorded in 2007 as shown in Table 5.19. The low productivity was associated to poor weather conditions especially low rainfall received in the last two seasons. With improved weather condition from late 2009, projections for 2010 indicate a realization of about 800-1,000 Kg/ha.

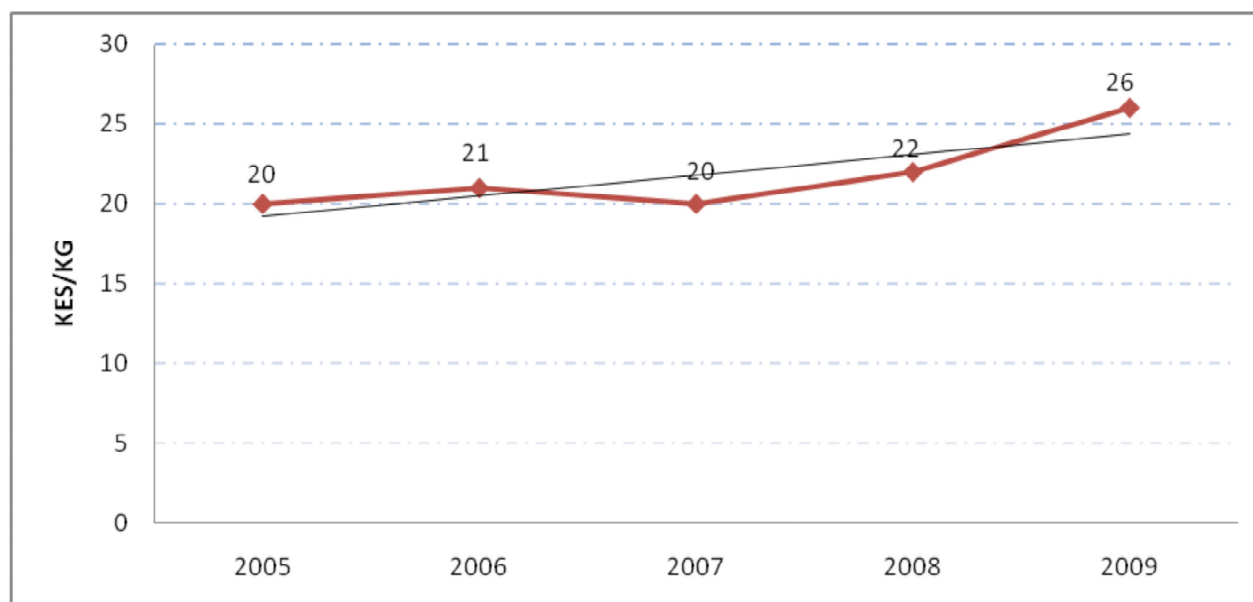
Meanwhile price of seed cotton has increased steadily from 2005 peaking at Kshs. 26/Kg in 2009 as shown in Figure 5.7.

Table 5 19: Cotton Production, 2005 - 2009

Year	2005	2006	2007	2008	2009
Area (Ha)	32,357	36,277	35,929	43,035	39,963
Production of seed cotton (tons)	19,414	22,492	24,993	15,093	14,886
Price of seed Cotton (Kshs/kg)	20	21	20	22	26
Yield (tons/ha)	0.6	0.6	0.69	0.35	0.37
Total value of seed cotton (Million Kshs)	388	472	1,250	332	387

Source: Cotton Development Authority

Figure 5 6: Trends in Cotton Prices, 2005- 2009



Source: Cotton Development Authority

5.2.5: Pyrethrum

Area dedicated to pyrethrum production was 4,084 ha in 2009, down by about 2,000 ha compared to 2006. Production has on average remained under 800 tons range since 2005 when production peaked at 1,003 tons as shown in Table 5.20. Meanwhile, prices have been erratic with 2009 representing the best per unit price of Kshs 101.2 per kg.

Table 5 20: Pyrethrum Production, 2005 - 2009

Year	2005	2006	2007	2008	2009
Area (ha)	3,552	6,325	5,120	3,916	4,084
Production of dry flower (tons)	1,003	763	846	776	754
Price of dry flowers (Kshs./kg)	73.0	73.0	108.8	73.7	101.2
Yield (tons/ha)	0.2	0.2	0.3	0.2	0.2
Exports (tons of pyrethrum extract)	124.0	130.0	142.0	5.8	8.5
Local value (Kshs. millions)	305.7	158.1	229.8	69.2	102.0

Source: Pyrethrum Board of Kenya

5.2.6: Sisal

There are eight (8) sisal estates accounting for 90 percent of the total sisal fibre produced for export and local consumption. Smallholder farmers who grow sisal along farm boundaries account for a small proportion of the sisal fibre utilized locally by the spinning and cottage industry. Spinning factories (Taita Ropes, Premier Bag and Cordage) absorb all the sisal fibre from the smallholder farmers. In 2009, production by small-holders fell drastically to 402 tons as shown in Table 5.21 attributed to prolonged drought conditions

Table 5 21: Sisal Production, 2005 – 2009

Year		2005	2006	2007	2008	2009
Total area (ha)		31,800	24,962	32,126	44,462	29,353
	Estate	31,800	24,962	32,126	40,176	25,068
	Small Holder	-	-	-	4,286	4,285
Total Production (tons)		25,600	26,375	24,602	46,558	19,048
Estate		25,600	26,375	24,602	24,494	18,646
Small Holders		-	-	-	22,064	402
Yield (tons/ha)		0.8	1.1	0.8	1.0	0.6
Local Consumption (tons)		4,335	5,378	2,793	4,336	2,790
Export		20,609	19,771	21,809	20,157	18,706
Value of Exports (Million KES)		1,145	1,072	1,335	1,370	1,118

Source: Sisal Board Kenya

5.3: HORTICULTURE

The horticulture industry has undoubtedly registered dramatic growth in the past decade as Tables 5.22-5.29 demonstrate. However, there are still challenges in reconciling overall production data with that of exports as provided through the HCDA.

In 2009, EU- Mainland was the largest importer of Kenya's horticultural produce at 248,370 tons thus pumping about Kshs. 36 billion into the economy. The EU destination also took about half of the exports as shown in figure 6.1.

Table 5 22: Total National Horticultural Crops Production Statistics: 2005-2009

Year	Hectare (Ha)					Production (MT)					Value (Kshs.000')				
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Fruits	158,695	160,209	155,248	148,715	141,121	2,542,795	2,544,155	2,622,803	2,959,731	2,821,027	35,616,291	38,450,692	40,568,641	44,685,696	33,493,333
Nuts	47,888	53,485	55,322	52,313	51,228	97,582	116,991	119,870	66,366	60,688	4,407,100	5,224,260	5,111,600	194,516	166,889
Vegetables	248,753	242,300	252,563	212,098	23,4345.1	4,883,566	4,668,177	4,906,735	4,095,277	4,699,012	47,114,560	46,150,073	50,281,933	65,613,770	72,886,280
Herbs & Spices	1,155	1,166	1,112	818	1089.65	9725	9,555	8,977	9,631	9,770	1,554,390	1,907,410	1,843,950	410,030	1,621,116
Flowers	-	-	-	-	-	-	-	108,306	131,163	120,394	-	-	-	40,910,701	37,086,269
Total	456,491	457,160	464,245	413,944	427,783.75	7,533,668	7,338,878	7,766,691	7,262,168	7,710,891	88,692,341	91,732,435	127,534,314	153,561,713	145,253,887

NOTE: Data on flower exports is at F.O.B prices and 5% of total flowers produced in the country is consumed locally at half the F.O.B (average) prices

Table 5 23: Export Statistics: 2007 - 2008

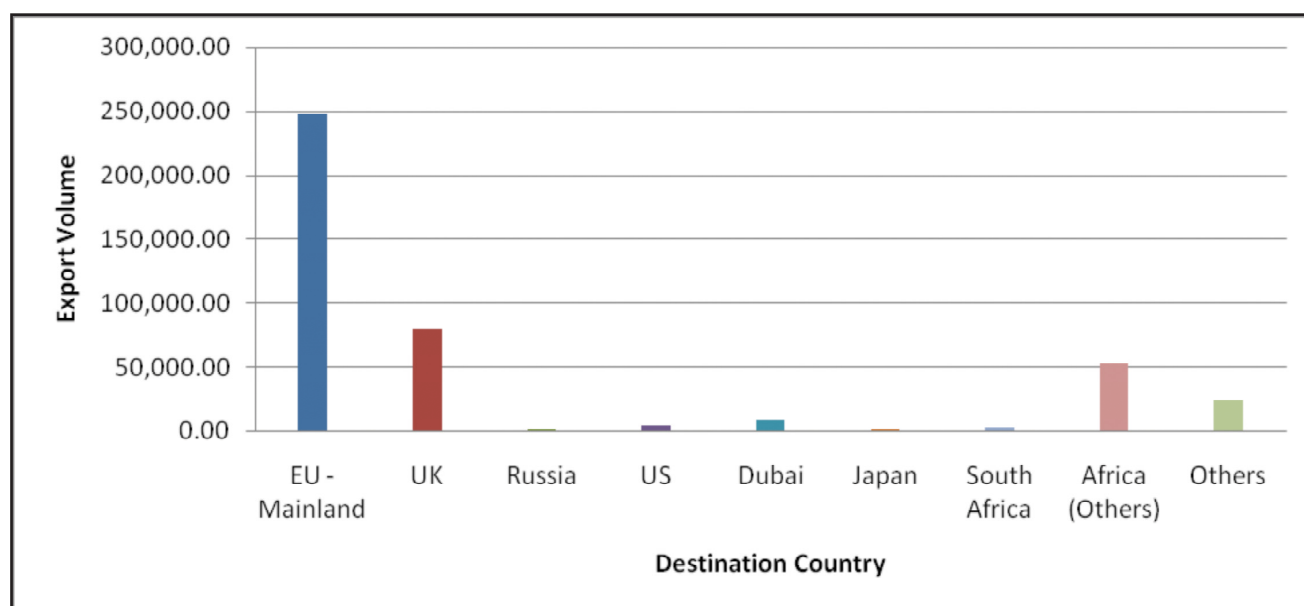
Export	2007			2008			2009		
	Quantity--Kgs	FOB Value--Ksh.	Quantity--Kgs	FOB Value--Ksh.	Quantity--Kgs	FOB Value--Ksh.	Quantity--Kgs	FOB Value--Ksh.	
Bulbs and Tubers	81,540	81,588,534	4,611	7,317,233	6,177,729	4,395,074,452	-	-	
Cuttings and slips	4,379,066	3,410,709,319	4,538,425	3,603,573,367	-	-	-	-	
Cut flowers	97,798,445	21,066,453,212	113,569,136	30,691,378,493	114,123,361	32,610,071,609	93,878	81,123,163	
Fresh foliage	6,046,660	5,169,439,313	6,804,609	5,609,072,340	120,394,968	37,086,269,224	17,168,849,884	240,428,746	
Total Flowers	108,305,711	29,728,190,378	124,916,781	39,911,341,433	120,394,968	37,086,269,224	17,168,849,884	240,428,746	
Fresh Vegetables	80,223,340	15,926,214,625	78,157,022	17,948,404,024	73,872,358	17,168,849,884	14,442,302	1,981,998,733	
Dried Veges	40,793,314	1,291,515,848	17,090,863	931,729,309	4,169,053	240,428,746	6,652,819	5,534,751,076	
Processed Veges	26,802,922	2,750,913,993	28,238,798	5,096,935,874	14,442,302	1,981,998,733	4,974,646	724,099,742	
Other Vegetable Products	-	-	6,290,137	5,602,583,261	6,652,819	5,534,751,076	4,974,646	724,099,742	
Spices	-	-	4,182,433	607,225,914	4,974,646	724,099,742	4,974,646	724,099,742	
Total Vegetables	147,819,576	19,968,644,466	129,776,820	29,579,652,468	104,111,178	25,650,128,181	104,111,178	25,650,128,181	
Fresh Fruits	20,386,953	1,422,748,916	24,053,946	1,790,362,015	35,266,454	2,380,727,699	35,266,454	2,380,727,699	
Processed Fruits	97,292,872	5,281,562,595	121,208,724	6,889,044,929	73,290,517	5,202,521,497	73,290,517	5,202,521,497	
Total-Fruits	117,679,825	6,704,311,511	145,262,670	8,679,406,944	108,556,971	7,583,249,196	108,556,971	7,583,249,196	
Nuts	11,383,861	857,212,331	29,463,369	1,169,976,847	27,410,997	1,278,347,491	27,410,997	1,278,347,491	
Grand Total	385,188,973	57,258,358,686	423,129,503	73,737,794,431	360,474,114	71,597,994,092	360,474,114	71,597,994,092	

Table 5 24: Export Destinations for Horticultural Produce/Products – 2008

Destination	Quantity (kg)	% kg	Value (Kshs)	% Value
EU - Mainland	248,370,224.601	58.698	36,592,470,890.244	49.6
UK	79,656,255.263	18.826	24,213,108,440.575	32.5
Russia	1,182,781.194	0.280	286,342,899.659	0.4
US	4,618,408.314	1.091	649,088,387.300	0.9
Dubai	8,611,692.500	2.035	1,026,128,450.507	1.4
Japan	928,090.882	0.219	505,535,011.904	0.7
South Africa	2,554,791.225	0.604	272,921,37.381	0.4
Africa (Others)	52,771,648.221	12.472	8,227,801,660.367	11.2
Others	24,435,580.933	5.775	1,962,614,138.938	2.7
Totals	423,129,473.132	100.000	73,736,011,252.920	100

Source: KRA, HCDA, KHDP, KEPHIS, FPEAK and KFC

Figure 6. 1 : Horticulture Export Destinations



Source: HCDA

Table 5 25: Volumes in kgs of Top 15 Fruits and Nuts Exported: 2005-2008

Year	2005	2006	2007	2008	2009
Avocado	15,242,756	12,960,176	13,184,490	14,639,239	18,409,520.80
Mango	1,002,129	1,182,181	962,999	1,037,686	1,788,724.45
Passion fruit	1,036,255	1,069,350	1,291,885	1,157,618	831,329.71
Macadamia nuts	811,965	-	121,880	300	116
Pineapple	287,923	154,714	75,048	93,303	90,293.40
Apple	34,798	725	1,500	2,528	3,232.21
Cashew nuts	29,326	-	-	-	-
Banana	17,229	6,367	16,094	11,033	5,307.31
Oranges	10,613	-	-	-	-
Mixed fruits	10,425	10,539	7,265	86,178	88,812.18
Pawpaw	10,079	5,408	3,783	86,178	3,863.00
Melon	5,223	4,853	2,339	680	975.10
Custard apple	3,965	978	1,382	-	-
Lemon	-	437	592		110
Coconut	-	701	660	1,324	91.70

Source: HCDA

Table 5 26: Performance of Fruits

Fruit	Hectare (Ha)					Production (MT)					Value (Kshs. '000 ²)				
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Bananas	83,733	82,518	79,116	82,766	69,889	1,255,995	1,237,770	1,186,740	1,686,930	1,686,930	1,507,194	1,694,376	1,708,582	23,776,410	14,552,842
Mangoes	23,915	25,271	26,409	28,794	32,706	254,413	248,531	384,461	448,631	474,608	3,125,055	3,682,965	5,792,991	6,399,598	6,287,186
Avocado	6,535	7,002	7,203	6,751	4,221	84,955	91,026	93,639	103,523	70,806	1,274,325	1,365,390	1,404,585	2,197,429	1,448,797
Citrus	13,635	13,295	10,925	8,048	11,429	109,080	106,840	87,400	123,587	138,833	2,181,600	2,233,760	1,748,000	2,427,406	2,731,022
P/fruit	3,958	4,454	5,193	3,583	3,159	53,396	61,440	71,283	49,662	39,800	1,601,850	1,843,185	2,138,475	1,513,440	1,305,631
P/apples	15,158	15,124	14,271	7,792	7,908	498,469	499,409	514,490	339,850	257,623	7,477,035	7,491,135	7,717,350	4,827,785	4,446,637
Pawpaws	7,514	7,653	7,272	6,791	7,329	225,420	229,590	218,160	153,592	98,677	3,600,450	3,443,850	3,272,400	2,228,472	1,435,658
Melons	1,466	1,642	1,614	1,493	2,033	29,320	32,840	32,240	31,380	36,025	879,600	985,200	967,200	830,715	946,191
Apples	239	248	203	153	73	4,302	4,464	3,654	2,490	1,254	107,550	111,600	91,350	82,800	69,903
Plums	543	824	851	498	124	8,688	13,184	13,616	3,066	1,492	69,504	105,472	108,928	83,831	52,422
Pears	751	729	455	394	180	105,14	102,06	63,70	5,084	2,437	94,626	91,854	57,330	75,810	41,897
Peaches	78	96	86	29	34	1,248	1,536	1,376	232	390	14,976	18,432	16,512	6,264	6,258
Guavas	251	308	380	583	1,099	12,55	15,40	19,00	2,794	6,010	18,825	23,100	28,500	17,523	39,872
Grapes	195	377	404	201	112	585	1,131	1,212	681	371	20,475	39,585	42,420	26,505	18,925
Custard Apple	117	112	108	100	124	585	560	540	400	639	11,700	11,200	10,800	7,560	8,498
Trec Tomato	408	376	587	529	403	3,376	3,008	4,696	6,127	2,857	50,640	45,120	70,440	161,771	65,703
Loquats	155	140	125	149	213	930	840	750	1,162	1,485	5,580	5,484	4,500	13,174	18,144
S/berries	44	40	46	10	12	264	240	276	20	50	10,560	9,600	11,040	1,000	4,227
White Sapota	-	-	-	51	73	-	-	-	520	740	-	-	-	8,203	13,520
Total	158,695	160,209	155,248	148,715	141,121	2,542,795	2,544,155	2,622,803	2,959,731	2,821,027	35,616,291	38,450,692	40,568,641	44,685,696	33,493,333

Table 5 27: Performance of Nuts

Crop	Hectareage (Ha)				Production (MT)				Value (Kshs.'000)						
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Macadamia	2,591	2,935	2,801	3,382	1,995	18,137	20,545	19,607	19,290	14,777	1,088,220	1,228,500	962,080	537,330	385,601
Cashew nuts	28,223	27,602	27,750	29,950	28,593	28,223	27,602	27,750	29,950	24,457	1,270,000	1,242,000	1,249,000	778,700	489,138
Groundnuts	17,074	22,948	24,771	18,981	20,640	51,222	68,844	72,513	17,126	21,454	2,048,880	2,753,760	2,900,520	625,486	792,150
Nuts total	47,888	53,485	55,322	52,313	51,228	97,582	116,991	119,870	66,366	60,688	4,407,100	5,224,260	5,111,600	1,941,516	1,66,889

Table 5 28: Performance of Vegetables

Crop	Hectare (Ha)	Production (MT)	Value (Ksh.'000)	Value (Ksh.'000)											
				2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	2005	2006
Cabbage	21,529	21,559	24,892	19,138	14,782.6	14,782.6	19,138	609,292	461,129	627,828	2,953,349	2,960,713	3,345,848	5,965,097	8651430
Kales	26,817	28,459	28,250	25,182	25122	402,263	426,885	423,750	378,791	356869	4,022,625	4,268,850	4,237,500	3,702,192	4304866
Tomatoes	20,743	19,542	18,926	16400	17182	542,940	503,730	567,780	402,070	526922	13,573,500	12,593,250	14,194,500	13,388,700	15,954,866
Bulb Onions	6,395	7,100	8,254	7892	6934	95,925	106,500	123,810	123,268	88923	3,357,375	3,727,500	4,333,350	4,388,750	2,559,701
Carrots	2,737	3,535	4,462	3485	3165	38,318	49,490	62,790	89,134	82252	574,770	742,350	941,850	1,498,785	1,583,430
French Beans	7,004	6,154	7,733	4616	3336	70,040	61,540	67,330	92,095	46496	2,101,200	1,846,200	2,019,900	2,924,920	1,738,770
Spinach	2,203	3,763	3,668	3,910	2595	28,639	48,919	47,684	76,219	50539	286,390	489,190	474,630	1,065,420	666,313
Garden Peas	6,924	8,075	11,809	9,814	11025	34,620	40,375	59,045	45,472	75404	1,038,600	1,211,250	1,771,350	1,167,130	2,128,791
Snow/snap peas	1,550	2,097	2,461	2,472	2648	9,300	12,582	14,766	11,563	14,267	418,500	566,190	664,470	512,408	589,922

Crop	Hectare (Ha)		Production (MT)		Value (Ksh.'000)		2005		2006		2007		2008		2009		2005		2006		2007		2008		2009		
	2005	2006	2006	2007	2007	2008	2008	2009	2009	2005	2006	2006	2007	2007	2008	2008	2009	2009	2005	2006	2006	2007	2007	2008	2008	2009	2009
Irish Potatoes	132,030	120,754	120,754	121,724	91,778	108199	108199	2,939,200	2,692,950	2,789,160	2,176,012	2,550,128	14,696,000	13,464,750	13,946,300	26,482,540	28508400										
Chillies	1,286	1,052	1,052	1,085	1244	1179	1179	12,860	10,520	10,850	9,603	8704	321,500	263,000	271,250	331,488	211491										
Karela	372	376	376	274	267	161	161	4,464	4,512	3,288	3219	1026	111,600	112,800	82,200	93,570	13992										
Durdhi	177	168	168	163	152	229	229	2,390	2,268	2,290	1,556	2154	59,738	56,700	57,250	31,360	33720										
Okra	863	834	834	548	545	633	633	6,904	6,672	4,384	5,024	4246	172,600	166,800	109,600	123,400	99385										
Turia	113	93	93	93	93	75	75	791	651	651	719	532	19,775	16,275	16,250	15,255	10332										
Valore	160	157	157	139	41	80	80	745	585	973	164	275	14,027	8,775	24,325	4,920	8250										
Tindori	46	46	46	41	51	50	50	368	368	328	514	375	9,200	9,200	8,200	10,280	7583										
Capsicums	1,047	1,027	1,027	990	1,414	1272	1272	10,470	10,270	9,900	12,013	13357	314,100	308,100	297,000	315,473	402184										
Spring onions	1,107	1,180	1,180	1,345	1,294	2045	2045	13,284	14,160	16,140	37,173	26387	79,704	84,960	96,840	415,905	435685										
Cucumber	67	76	76	52	68	173	173	740	850	660	1,325	3019	25,900	29,750	23,100	43,775	70988										
Courgettes/squash	223	251	251	182	553	782	782	2,230	2,510	1,820	7,866	6791	55,750	62,750	44,500	209,754	213629										
Cauliflower	132	138	138	70	61	87.5	87.5	2,244	2,346	1,190	852	994	100,980	105,570	53,550	51,120	548656										
Lettuce	105	115	115	138	181	186	186	900	1,212	1,504	2,067	1475	72,000	78,480	45,520	54,560	42666										
Radish	15	19	19	24	2	10	10	120	152	192	14	70.0	3,000	3,800	4,800	350	1808										

Crop	Hectare (Ha)		Value (Ksh.'000)												
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Baby corn	82	120	206	294	588	640	960	1,648	1,774	5662	12,432	19,200	32,960	41,028	224149
Pumpkin (fruit)	296	316	359	583	887	5,850	6,165	10,020	12,283	18973	231,900	241,950	486,000	244,004	482483
Rummer / broad beans	255	323	377	296	269	8,925	11,305	13,195	8,032	6085	357,000	494,235	593,775	308,480	229800
Butternuts	56	108	101	289	532	1400	2,097	2100	5337	6978	56,000	73,940	78,500	166,940	179696
Broccoli	50	56	72	147	27	415	439	517	3,090	1845	36,125	39,525	44,795	166,060	80203
Sweet corn	-	-	15	-	1	-	-	150	-	5	-	-	-	3,300	500
Indigenous veges	13,541	13,946	13,336	18,968	-	108,328	111,568	106,688	108,039	-	1,624,920	1,673,520	1,600,320	1,525,856	-
Amaranth leaves	-	-	-	-	3722	-	-	-	-	31965	-	-	-	-	582,424
Spider	-	-	-	-	2508	-	-	-	-	14303	-	-	-	-	230611
Black night shade	-	-	-	-	3137	-	-	-	-	2168	-	-	-	-	420089
Cowpea leaves	-	-	-	-	15778	-	-	-	-	91014	-	-	-	-	1109601
Apoth/ Murenda	-	-	-	-	1332	-	-	-	-	10861	-	-	-	-	144730
Mitoo	-	-	-	-	721	-	-	-	-	7011	-	-	-	-	120803
Nderema	-	-	-	-	62	-	-	-	-	308	-	-	-	-	6190
Kahurura	-	-	-	-	5	-	-	-	-	35	-	-	-	-	420
Total	248,753	242,300	252,563	212,098	234345.1	4,883,566	4,668,177	4,906,735	4,095,277	4699012	47,114,560	46,150,073	50,281,933	65,613,770	72886280

Table 5 29: Performance of herbs & spices

Crop	Achieved Area (Ha)					Production (MT)					Value (Ksh. 000)				
	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009	2005	2006	2007	2008	2009
Coriander	324	359	225	99	125	1,620	1,795	1,125	820	805	77,250	89,750	56,250	19,400	19,840
Leeks	159	156	400	256	202	1,113	1,092	2,798	3,890	1,565	44,520	43,680	112,000	101,850	23,100
Celery	112	106	12	-	120	672	636	72	-	2880	40,320	38,160	2,880	-	14,690
Garlic	263	239	169	301	621.65	3,945	3,585	2,535	3625	4233	236,700	215,100	152,100	197,100	273,230
Mint	1	2	2	-	-	8	16	16	-	-	280,000	640,000	640,000	-	1,280,036
Parsley	1	1	1	-	2	7	7	7	-	9	700,000	700,000	700,000	-	750
Tumeric	55	55	55	50	3	440	440	440	400	14	22,000	22,000	22,000	20,000	420
Ginger	120	124	124	112	4	960	992	992	896	24	76,800	79,360	79,360	71,680	650
Rosemary	120	124	124	-	12	960	992	992	-	240	76,800	79,360	79,360	-	8400
Total	1155	1166	1112	818	1,089.65	9,725	9,555	8,977	9,631	9,770	1,554,390	1,907,410	1,843,950	410,030	1,621,116

6.0 Livestock Sub-sector

6.1 Milk and Milk Products

World milk production in 2009 reached 701 million litres, an increase of over 1.0 percent above 2008 with production increasing much faster in developing countries. The gap between these differing patterns of growth is expected to widen in 2010, with high growth in the developing world at 4 percent and a virtual stagnation of output in the developed countries. World milk production in 2010 is projected to grow by 2 percent. Milk production in Africa is also anticipated to grow at 2 percent in 2010 to peak at 37.4 million liters.

In Kenya, dry weather constrained dairy production in 2009 as output decreased by 5 percent to 4.2 million liters. Demand for dairy products stagnated in 2009 and farm gate prices decreased substantially with the fall in international prices, eroding profitability and deteriorating farm liquidity.

6.2 Beef Industry

Beef sector has been negatively affected by falling consumer demand, poor pasture conditions and more difficult access to credit. These impaired the commercially oriented producing countries in 2009. As a result, projected stable world beef production in 2009 did not materialize. Instead, production is forecast to contract for the second consecutive year to 64.4 million tons, largely on account of falling output in Australia, Brazil, China, the European Union, the Russian Federation, Ukraine and the United States.

In Eastern Africa, the scarcity of adequate pasture and water in 2009 caused major animal losses and worsened livestock conditions in the pastoral regions of Ethiopia, Kenya, the Sudan and Tanzania, with a detrimental impact on pastoralists' income and their ability to access staple foods. Reproduction rates of livestock have suffered from successive poor rains since 2007, making the recovery of agro pastoral and pastoral livelihood systems more difficult and endangering long-term food security.

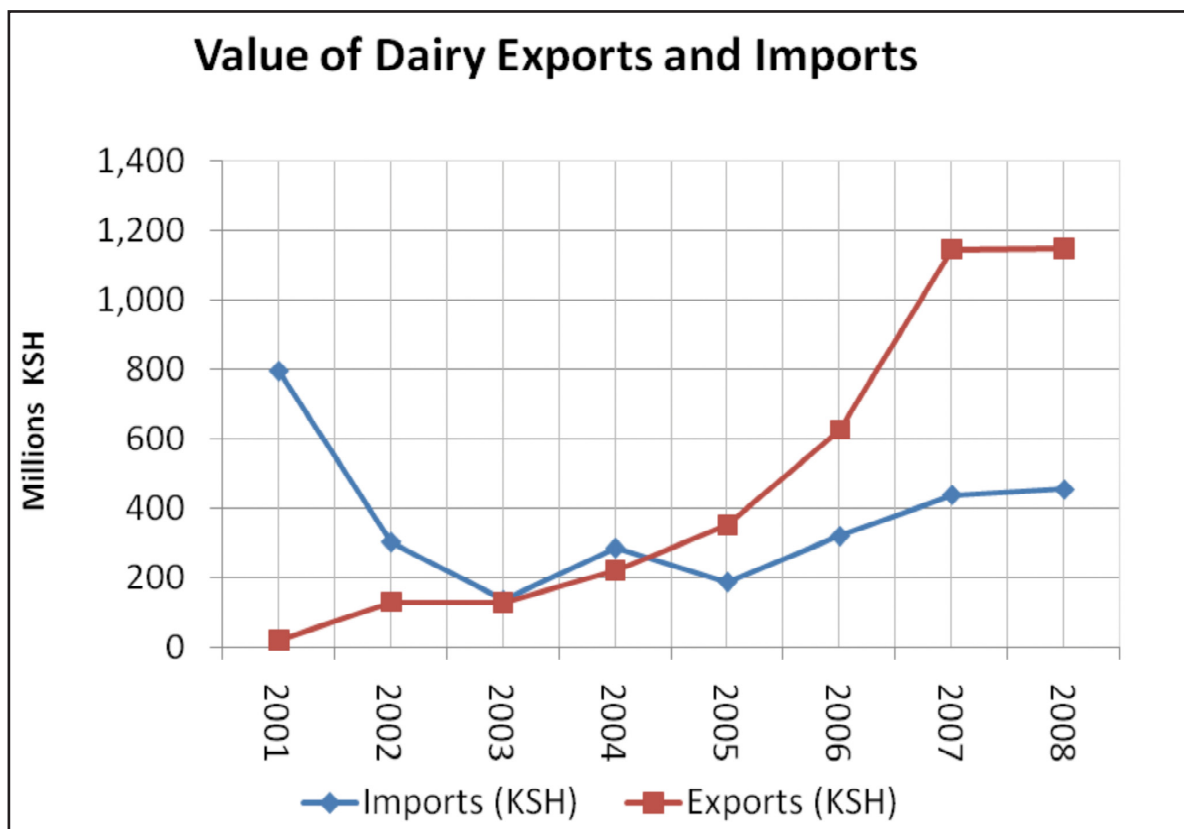
Despite brighter economic prospects in 2010, the beef sector may be under pressure in 2010, with global production preliminary forecast to fall slightly to 64.0 million tones.

6.3 Dairy Industry

Kenya's milk production increased from 2.8 billion litres in 2002 to 4.2 billion litres in 2009. However, average milk production per cow per day at 5.7Kg is very low compared to the world average. Milk intakes by processors increased from 339 million litres to 406 million litres during the same period.

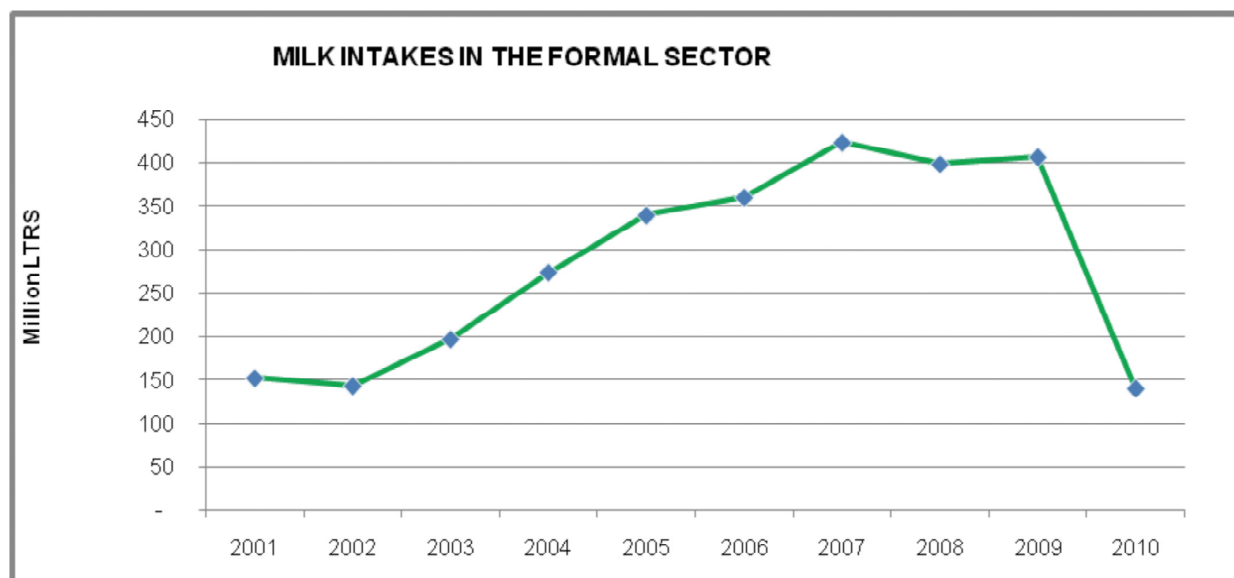
In 2008, export of dairy products remained flat at about Kshs 1.8 billion but reflects dramatic growth since 2001. Meanwhile dairy imports grew much slower as domestic production picked up during the period as illustrated in Figure 6.2.

Figure 6. 2: Dairy Export and Imports (2001-2008)



Source: Dairy Board

Figure 6. 3: Trends in Dairy Intake in the Formal Sector (2001-2008)



Source: Dairy Board

6.4 Beef Production

Beef production in Kenya is about 320,000 metric tons annually valued at about Kshs 44.8 billion. Red meat accounts for over 80 percent of all meat consumed locally. Kenya's main export markets for meat products include United Arab Emirates (UAE), Tanzania and Uganda, while the main markets for hides and skins are Germany, United Kingdom, Netherlands and Italy.

Potential export of meat and meat products to Europe and America remains a big challenge since Kenya has not been able to establish the necessary Disease Free Zones (DFZs) a mandatory requirement for entry into these markets.

7.0 FARM INPUTS

7.1 Annual Fertilizer Off-take 2001 -2010

Table 7 1: Fertilizer off-take Trends 2001-2010

TYPE OF FERTILIZER	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/2010
PLANTING									
DAP	98,285	116,295	105,724	150,569	136,254	164,964	155,212	158,973	178,520
MAP	10,476	31,674	1,144	3,420	2,157	2,712	3,932	5,013	7,720
TSP	-	3,948	4,622	201	599	3,198	9,157	9,299	9,764
SSP	470	1,970	3,999	2,010	6,000	4,980	20,221	18,307	17,405
NPK20:20:0	2,416	16,952	13,761	2,945	9,036	7,982	9,658	14,283	15,997
NPK23:23:0	10,868	21,987	8,567	10,300	18,713	16,175	21,831	20,118	23,500
Sub Total	122,516	192,825	137,817	169,445	172,760	200,011	220,012	225,993	252,906
TOP-DRESSING									
CAN	44,560	59,801	30,700	51,456	59,739	69,714	78,080	84,939	92,712
ASN	850	630	-	-	-	500	543	2,100	3,520
UREA	37,557	24,288	45,084	25,017	41,071	28,554	29,982	30,128	32,237
SA	5,325	425	4,005	-	1,029	1,340	1,514	2,943	3,031
Sub Total	88,292	85,144	70,617	76,473	101,839	100,107	110,119	120,110	131,500
TEA									
NPK25:5:5:5s	78,531	52,000	64,764	76,375	58,276	69,550	16,056	58,948	59,537
NPK25:5:5:3.95s+2.6MgO	-	-	348	-	-	-	-	-	-
NPK22:21:17	-	-	20	-	21	7	3	-	-
NPK22:6:12+5S	220	12,083	185	-	2,327	768	800	-	-
Sub Total	78,751	64,083	47,168	76,375	60,624	70,325	16,859	73,948	59,537

TYPE OF FERTILIZER	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/2010
TEA									
NPK25:5:5:5s	78,531	52,000	64,764	76,375	58,276	69,550	16,056	58,948	59,537
NPK25:5:5:3.95s+2.6MgO	-	-	348	-	-	-	-	-	-
NPK22:2:1:17	-	-	20	-	21	7	3	-	-
NPK22:6:12+5S	220	12,083	185	-	2,327	768	800	-	-
Sub Total	78,751	64,083	47,168	76,375	60,624	70,325	16,859	73,948	59,537
COFFEE									
NPK18:4:12	3,658	7,514	2,150	-	-	-	1,500	1,685	1,769
NPK20:10:10	6,157	2,765	888	-	10,053	3,317	3,616	3,827	3,904
NPK17:17:17:	12,227	2,377	5,209	2,948	16,717	15,517	15,601	18,769	21,209
NPK16:16:16	-	-	-	-	210	-	-	-	-
Sub Total	22,042	12,656	16,985	2,948	26,980	18,834	20,717	24,281	26,882
TOBACCO									
NPK12:2:43	-	-	-	-	-	-	-	-	-
NPK8:16:24+MgO+0.1%B	-	-	252	542	-	-	-	-	-
NPK15:15:6+4MgO+0.1%B	-	-	-	-	-	-	-	-	-
NPK16:12:24	-	-	-	-	-	-	-	-	-
NPK5:15:25	-	-	-	-	-	-	-	-	-
NPK13:9:21+MgO	-	-	-	-	-	-	-	-	-
NPK10:4:7:0.2	-	-	-	-	-	-	-	-	-
Sub Total	-	-	252	542	-	-	-	-	-
SPECIALISED									

TYPE OF FERTILIZER	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/2010
SPECIALISED									
MgNo3	929	1,595	799	208	420	738	836	1,012	2,593
MgSo4	4,160	2,071	3,221	1,026	3,150	3,040	3,070	3,715	3,938
CN	2,769	2,913	6,916	3,997	900	597	615	744	1,826
MOP/SOP	1,125	1,593	6,121	12,510	10,396	6,411	7,115	8,609	9,642
AN	312	219	623	749	2,746	1,006	1,207	1,460	1,606
Iron chelate	2,285	5	57	10		2,020	2,427	2,937	3,113
Potassium Nitrate	201	813	2,298	644		2,083	2,187	2,646	2,831
NPK28:28:0	174	2,736	-	-		-		605	659
NPK19:19:19	234	2,314	11	42	118	539	550	666	686
NPK19:19:19+M.E+1%MgO	1,915	20	-	-		4	25	30	40
Ferrous sulphate	172	563	1,780	-	1,475	1,987	2,100	2,541	2,592
Organic fertilizer	816	8,320	9,865	-		1,000	1,250	1,513	1,558
Others	2,756	2,367	-	6,808	1,877	1,514	1,650	1,816	1,834
Sub Total	17,848	25,528	31,691	25,994	21,082	20,938	23,033	26,176	32,959
GRAND-TOTAL	329,449	335,009	312,440	351,776	383,285	410,214	390,740	470,508	503,784

Source: Department of Agribusiness, Market Development and Agricultural Information
* Estimate

7.2 Retail Fertilizer Prices

Table 7 2: Fertilizer Prices for the years 1998 to 2007

FERTILIZER PRICES PER 50KG BAG										
FERTILIZER TYPES / YEAR	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
SSP	825	850	825	825	850	850	850	1100	1100	1400
TSP	1250	1250	1125	1150	1150	1500	1550	1600	1700	2100
DAP	1250	1350	1250	1150	1125	1500	1500	1680	2000	2250
MAP	950	1300	1080	1050	975	1450	1500	1680	1700	1950
ASN	1150	1250	950	900	925	1250	1250	1300	1300	1250
CAN	1100	950	875	850	900	1250	1250	1350	1350	1350
SA	1000	900	700	700	750	1250	1250	1300	950	1150
UREA	1050	1100	780	750	900	1250	1250	1400	1800	2000
NPK 20:20:0	1160	1250	1100	1075	1100	1350	1350	1600	1500	1800
NPK 17-17-17	1175	1250	1200	1200	980	1250	1300	1400	1600	1900
NPK 23:23:0	1210	1250	1100	1075	1065	1400	1500	1600	1500	1800

Source: Department of Agribusiness, Market Development and Agricultural Information
* Estimate

Table 7 3: Fertilizer prices for the year 2008

FERTILIZER	2008												
Type	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Average
DAP	2,500	3,600	4,000	4,000	4,250	4,250	4,500	4,700	5,200	6,500	6,000	4,500	4,500
MAP	2,500	3,600	3,800	4,000	4,250	4,250	4,500	4,700	5,200	6,500	6,000	4,500	4,483
SSP	1,200	1,500	1,650	2,000	2,500	2,500	2,500	2,500	2,650	2,650	2,650	2,650	2,246
20:20:00	2,200	2,500	3,400	3,600	3,800	3,800	3,800	4,000	4,200	4,500	4,500	3,800	3,675
23:23:00	2,200	2,500	3,400	3,600	3,800	3,800	3,800	4,000	4,200	4,500	4,500	3,800	3,675
17:17:17	2,000	2,500	3,000	3,800	3,800	3,800	3,800	3,800	4,200	4,500	4,500	3,800	3,625
CAN	1,400	1,500	2,000	2,500	2,500	2,500	2,500	2,500	2,500	2,800	3,000	2,500	2,350
UREA	1,800	2,000	3,100	2,500	2,500	2,500	2,500	2,500	2,600	3,000	3,000	2,600	2,550

Source: Department of Agribusiness, Market Development and Agricultural Information
* Estimate

Table 7 4: Fertilizer Prices for the Year 2009

FERTILIZER Type	2009												Average
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
DAP	3500	3200	3000	2900	2900	2900	2800	2500	2500	2400	2300	2300	2,767
MAP	3500	3200	3000	2900	2900	2900	2800	2500	2500	2400	2300	2300	2,767
SSP	2650	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2,513
20:20:00	2500	2100	2100	2100	2100	2100	2100	2100	2200	2200	2200	2200	2,167
23:23:00	2500	2100	2100	2100	2100	2100	2100	2100	2200	2200	2200	2200	2,167
17:17:17	2300	1950	1950	1950	1950	1950	1950	1950	2000	2100	2100	2100	2,021
CAN	2500	2300	2200	2000	1900	1900	1900	1800	1700	1600	1600	1600	1,917
UREA	2500	2300	2200	2000	1900	1900	1900	1800	2000	2000	2000	2000	2,042

Source: Department of Agribusiness, Market Development and Agricultural Information

* Estimate

7.3 Seeds

Seed production on all major varieties increased significantly in 2009 with maize increasing by 23 per cent, barley by 49 per cent and pigeon peas by 136 per cent as shown in Table 7.5 and further details in the annexes.

Table 7 5: Selected Seed Production and Importation

Crop	Description	Quantities produced and imported				
		2005	2006	2007	2008	2009
Barley	Local production (kg)	1,650,650	1,626,900	1,946,260	1,086,050	1,621,100
	Imports (kg)	0	0	0	0	0
	Total (kg)	1,650,650	1,626,900	1,946,260	1,086,050	1,621,100
	Imports (as % of Total)	0	0	0	0	0
Beans	Local production (kg)	607,958	172,960	375,247	440,123	411,694
	Imports (kg)	567,851	0	1,288,149	0	2,600
	Total (kg)	1,175,809	172,960	1,663,396	440,123	414,294
	Imports (as % of Total)	48	0	77	0	1
Oats	Local production (kg)	12,090	2,820	31,250	0	39,033
	Imports (kg)	0	0	0	0	0
	Total (kg)	12,090	2,820	31,250	0	39,033
	Imports (as % of Total)	0	0	0	0	0

Crop	Description	Quantities produced and imported				
		2005	2006	2007	2008	2009
Maize	Local production (kg)	24,215,835	28,978,043	28,827,950	22,974,031	30,236,773
	Imports (kg)	2,345,544	3,022,287	2,937,700	2,504,207	3,015,309
	Total (kg)	26,561,379	32,000,330	31,765,650	25,478,238	33,252,082
	Imports (as % of Total)	9	9	9	10	9
Pearl Millet	Local production (kg)	45,147	32,576	58,817	0	27,072
	Imports (kg)	0	0	500	0	0
	Total (kg)	45,147	32,576	59,317	0	27,072
	Imports (as % of Total)	0	0	1	0	0
Peas	Local production (kg)	473,508	0	0	34,100	0
	Imports (kg)	444,398	0	0	483,162	0
	Total (kg)	917,906	0	0	517,262	0
	Imports (as % of Total)	48	0	0	93	0
Pigeon peas	Local production (kg)	19,240	7,300	0	3,573	8,416
	Imports (kg)	0	0	0	0	0
	Total (kg)	19,240	7,300	0	3,573	8,416
	Imports (as % of Total)	0	0	0	0	0
Finger Millet	Local production (kg)	0	3,242	0	67,075	105,136
	Imports (kg)	0	0	0	0	0
	Total (kg)	0	3,242	0	67,075	105,136
	Imports (as % of Total)	0	0	0	0	0
Cow peas	Local production (kg)	0	102,180	0	145,336	167,213
	Imports (kg)	0	0	0	0	0
	Total (kg)	0	102,180	0	145,336	167,213
	Imports (as % of Total)	0	0	0	0	0
Green Grams	Local production (kg)	0	24,622	37,924	133,631	203,213
	Imports (kg)	0	0	0	0	0
	Total (kg)	0	24,622	37,924	133,631	203,213
	Imports (as % of Total)	0	0	0	0	0
Ground Nuts	Local production (kg)	0	369	1,279	0	3,678
	Imports (kg)	0	0	0	0	0
	Total (kg)	0	369	1,279	0	3,678
	Imports (as % of Total)	0	0	0	0	0
Soya Beans	Local production (kg)	0	488	1,850	0	0
	Imports (kg)	0	0	0	139	2,000
	Total (kg)	0	488	1,850	139	2,000
	Imports (as % of Total)	0	0	0	100	100
Cotton	Local production (kg)	400	4,853	34,600	0	4,500
	Imports (kg)	0	0	0	0	0
	Total (kg)	400	4,853	34,600	0	4,500
	Imports (as % of Total)	0	0	0	0	0
Sorghum	Local production (kg)	230,662	492,410	551,170	606,239	3,275,210
	Imports (kg)	18,000	10,000	3,000	8,000	5,000
	Total (kg)	248,662	502,410	554,170	614,239	
	Imports (as % of Total)	7	2	1	1	
Sunflower	Local production (kg)	145,246	148,718	551,170	204,850	103,037
	Imports (kg)	13,200	28,200	3,000	927	200
	Total (kg)	158,446	176,918	554,170	205,777	103,237
	Imports (as % of Total)	8	16	1	0	0

Crop	Description	Quantities produced and imported				
		2005	2006	2007	2008	2009
Tobacco	Local production (kg)	0	0	0	0	0
	Imports (kg)	0	0	0	0	0
	Total (kg)	0	0	0	0	0
	Imports (as % of Total)	0	0	0	0	0
Wheat	Local production (kg)	1,842,592	1,369,281	1,194,350	3,127,710	4,629,926
	Imports (kg)	0	0	0	0	0
	Total (kg)	1,842,592	1,369,281	1,194,350	3,127,710	4,629,926
	Imports (as % of Total)	0	0	0	0	0

Source: KEPHIS

7.4 Agricultural Mechanization Services

Agricultural mechanization embraces the use of all types of hand, animal, and engine or motor powered tools, implements, machines and equipment for agricultural production, harvesting, on-farm primary processing and transport.

Normally, 84 percent of cultivated land is prepared using hand tools, 12 percent by animal drawn implements and 4 percent by powered equipment.

Most farmers are often unaware of the available and appropriate mechanization technologies that would enhance their labour productivity. This is worsened by the high cost of such crucial equipment. Further analysis of the existing situation regarding low mechanization in Kenya reveals three main causes namely:

- Inadequate mechanization extension services
- Inadequate access to mechanization technologies
- Lack of finance (to farmers and private contractors)

Kenya has an estimated fleet of 10,000 units of farm tractors ranging from 70HP and above that are considered to be within economic life. However about 50 percent of them are grounded at any one time due to:

- Mechanical failure resulting from handling or complicated component designs
- Inadequate operating and serving capital
- Inadequate service back-up

Additionally, there could be up to 30,000 more units that have outlived their economic life span or are grounded for various reasons.

The present level of agricultural mechanization in Kenya is on the basis of motorized power ranges from 95 percent in large farms to 4 percent in smallholder farming system. The degree of mechanization in Kenya is 3 tractors per 1,000 hectares of cultivated land.

In ASAL regions of Kenya, a total of about 460,000 ha of old land and 180,000 ha of new land is merchanisable but with little option of using animal power. To expand the area under cultivation by 26.3 percent the country would require an additional 7,000 tractors (This assumes an average of 127 ha per tractor under high level management) over a six month ploughing period.

Table 7.6 illustrates a trend in tractor imports from 2005 - 2009.

Table 7. 6: Tractor Imports 2005-10

	2005	2006	2007	2008	2009
MF	66	119	367	678	211
FORD/NEW HOLLAND	112	146	434	439	213
SAME	0	0	35	8	2
JOHN DEERE	2	4	53	1	28
FIAT	0	0	10	0	4
CASE	0	0	0	12	48
OTHERS	3	3	22	55	0
TOTAL	117	272	921	1193	508

Source: Land Development Directorate



ANNEXES



Annex I: Detailed Seed Statistics for 2009

	Common Name	Import (kgs)	Local (kgs)
1	Amaranth	2,294.00	9,351.00
2	Asparagus	242.00	
3	Barley		1,621,100.00
4	Basil	90.70	
5	Beans	2,600.00	411,694.00
6	Bentgrass	20.00	
7	Bermuda grass	7,499.00	
8	Bitter gourd	10.00	
9	Black night shade		1,837.50
10	Bottle gourd	10.00	
11	Brassicas	126,233.25	80,986.21
12	Broad beans	1,000.00	
13	Brown mustard	3,525.00	
14	Cantaloupe/Melon	71.40	
15	Carrot	89,696.60	
16	Celery	1,310.00	
17	Chard,beet	61,242.90	
18	Chervil	20.00	
19	Chick peas		900.00
20	Chinese cabbage	12.70	
21	Chives	390.00	
22	Cluster bean	2,000.00	
23	Coloured Guinea Grass		4,163.00
24	Columbus grass		2,333.00
25	Coriander	8,062.00	
26	Cotton		4,500.00
27	Cow peas		167,213.00
28	Creeping bent grass	102.00	
29	Crotalaria		2,285.00
30	Cucumber	5,971.95	
31	Desmodium		682.00
32	Dill	25.00	
33	Dolichos bean		2,737.00
34	Eggplant	11,762.90	
35	Eucalyptus	0.50	
36	Fennel	14.70	
37	Fenugreek	1,700.00	
38	Finger Millet		105,136.00
39	French Beans	360,305.93	13,382.00
40	Gourd	130.00	
41	Green grams		203,213.00

	Common Name	Import (kgs)	Local (kgs)
42	Green leaf desmodium	1,150.00	36.00
43	Groundnuts		3,678.00
45	Herbs	42.00	
46	Jews mallow		320.00
47	Kikuyu grass	400.00	525.00
48	Leek	3,068.80	0
49	Lettuce	1,259.20	0
50	Lucerne	10,540.00	0
51	Maize	3,015,309.00	30,236,773.00
52	Moluccella	100.00	0
53	Nandi setaria		579.00
54	Oats		39,033.00
55	Okra	38,254.50	23,735.00
56	Onion	126,164.45	2,848.50
57	Parsley	574.00	50
58	Pearl Millet		27,072.00
59	Pepper	11,742.06	1,879.58
60	Physic nut	100.00	
61	Pigeon peas		8,416.00
62	Pumpkin/Squash	11,313.67	300.00
63	Radish	1,874.00	0
64	Rhodes grass	0	139,829.00
65	Roquette	1,090.00	
66	Runner bean	85,367.00	17,000.00
67	Sorghum	5,000.00	3,275,210.00
68	Soya beans	2,000.00	
69	Spider plant		6,351.00
70	Spinach	4,392.00	0
71	Sudan grass	8,750.00	20,288.00
72	Sugar peas	388,874.50	14,501.00
73	Sun Hemp	750.00	0
74	Sunflower	200.00	103,037.00
75	Tomato	44,242.40	2,298.50
76	Turnip	3,794.90	1,675.00
78	Watercress	35.00	
79	Watermelon	22,192.80	3,015.00
80	Welsh onion	325.00	0
81	Wheat		4,629,926.00
82	Wild Rocket	360.00	

Source: KEPHIS

Ministry of Agriculture
Kilimo House, Cathedral Road
P.O. Box 30028-00100
Nairobi, Kenya
Tel: +254 20 2718870 Fax: +254 20 2732884
Email: planning@kilimo.go.ke